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THE ALTERNATIVE FOR POWER COMPUTING

WWW.ACORNUSER.COM



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Getting it together with USB

On show

The Wakefield Show in full

Strategy gaming

The TEK review at last

Crystal gazing

Going transparent with Artworks

Programming

S-Base and Dr Wimp continue

Plus all your favourite regulars

tau PRESS

ISSUE 248 JULY 2002 £4.20

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cool summer DEALS
to put all others in the shade!

CDRW KINETIC RiscPC



The world's fastest RISC OS computer is available now! The Kinetic RiscPC delivers a breath-taking performance and is up to 40 times faster than the original RiscPC!

- Rev T StrongARM processor
- RISC OS 4
- 128Mb Fast SDRAM
- 2Mb VRAM
- 40Gb hard drive
- 40x CDRW CD ROM drive
- FREE software – Oregano, EasiWriter (reads MS Word docs), Resultz

Code	Description	Offer price
KIN53	Kinetic CDRW	£1291

CASTLE 100BaseT network cards

Advanced 32-bit technology



- Unbeatable 32-bit 100BaseT network podule
- Full/Half Duplex Support
- Switched Ethernet Support
- Auto negotiation 10/100

Code	Description	Retail price
NET20	32-bit 10/100BaseT podule	£116
NET21	10/100BaseT NIC card	£89

RICOH CD re-writer



Use our IDE CD burner to create CDs for archive and publication – also doubles as standard CD reader

- 40x read, 24x write, 10x rewrite
- FREE – !CDBurn software
- FREE – Internal fitting kit
- SCSI and faster drives also available

Code	Description	Brochure price	Offer price
CDR25	CD re-writer	£210	£149

Mustek colour scanner

A4 flatbed scanner



- 30-bit
- Parallel port scanner
- Printer through connector
- David Pilling's Scanning Software
- Twain and PC software
- SCSI version also available

Code	Description	Brochure price	Offer price
SCA23	Mustek 1200CP	£151	£99

iiyama Dual input LCD flat screens



- New flicker free TFT LCD technology
- Recommended resolutions
  17" – 1280 x 1024
  15" – 1024 x 768
- Wide angle viewing
- Tiny footprint
- 16 million colours
- Single input available at lower price
- 3 year on-site warranty

Code	Description	Offer price
MON21	Iiyama 15" LCD dual input	£419
MON23	Iiyama 17"LCD dual input	£589

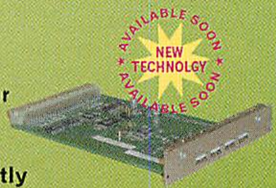
Upgrade to KINETIC

- New SDRAM processor card for all RISC PCs
- 4x faster than equivalent StrongARM card
- Free 64Mb SDRAM
- Free RISC OS 4

SPECIAL OFFER FREE 64 Mb RAM SPECIAL OFFER

Prices from £351.32 (trading up from RO4 and StrongARM)

CASTLE 4-port USB Interface



- 4 port USB interface card for RiscPC and A7000
- Free Keyboard & Mouse driver
- DeviceFS compliant
- USB 1.1 compliant
- Further drivers available shortly

Code	Description	Retail price	Offer price
USB01	4-port USB interface	£116	£89

SALES OFFICE OPEN MONDAY-FRIDAY
9am-5pm Tel: 01728 723200
24 HOUR ORDERING Fax: 01728 727427
E-mail: sales@castle.uk.co Web: www.castle.uk.co

Castle Technology Ltd, Ore Trading Estate, Woodbridge Road, Framlingham, Suffolk IP13 9LL UK
Offers valid until 1st December 2002 or whilst stocks last. Prices include vat but exclude delivery which is £15 per order. Full terms and conditions available on request. Official education orders accepted. Payment by credit/debit card, cheque, postal order. E&OE
*FREE 15" CRT Monitor or FREE 600dpi Mustek scanner inc Imagemaster and Twain.

CASTLE

Editor's Comment

On the plus side, the RISC OS market saw a brilliant show and a lot of new hardware: Network cards, USB cards and a new computer which, contrary to a small confusion, was really running RISC OS.

Yes it's true, the prototype RISC OS portable is running and has been seen to be running. Now all we need are the final working versions.

On the downside, at least for British (well Global really) industry, Microsoft continues to move toward its goal of driving all the middlemen out of the market and having complete control of business.

They were forced to put back the change to full "subscription" as opposed to licensing of software, but the time is drawing ever closer when they will. But it's not too late if you have a business that uses Microsoft products, you can still stick up two fingers at them for a while longer.

And finally, this month sees the start of a new regular on USB. This development provides our market with its biggest boost in a long time so keep an eye on what you can get and make sure you upgrade your machine to take advantage of it. The "Through the desktop" article will return next month.

Rob Donaldson

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www.realingenuity.net

APDL release new software at Wakefield

APDL have released two updates to existing packages. The first is an update to the original Clares Micro Supplies "Celebration" suite on CD-ROM. "Celebration 2" contains everything you need to produce bits and pieces for a special event, from calendars to certificates, gift wrap to greetings cards and more.

Six applications make up the Celebration 2 suite.

- Gift Wrap (allowing users to produce their own wrapping paper)
- Certify (print certificates for just about any situation)
- Banner (produce banners of up to several meters long)
- Calendar (quickly create professional calendars for any year)
- Card Shop (professional greeting cards in an instant)
- DrawTrix (produce fancy effects with Draw files)

APDL also include almost a hundred outline fonts, suitable for use with RISC OS 3.10 or later; and full documentation. The new Celebration suite costs £19.90.

The second release. "The Fun Learning Collection" is also available on a CD-ROM comprising of "DataWord", "Picture Book", "Money Matters" and "Target Maths" all previously published by The Really Good Software Company.

DataWord is best described as an introduction to data handling. Using the standard RISC OS interface, users have the opportunity to gain an understanding of how databases are constructed and linked together; or take advantage of some of the friendly multiple-choice quiz games available.

Picture Book is a child's first ABC book. Using bright graphics and meaningful sounds, users have the opportunity to gain a better understanding of both the alphabet and spelling words of the alphabet. The version supplied has been updated considerably to interact better with the RISC OS 4 environment, but is still fully RISC OS 3 compatible.

Target Maths aims to develop a child's understanding of numbers (through multiplication, subtraction, addition and division) further through playing of entertaining yet educational games.

Finally, Money Matters uses a circus as the basis for a series of fun number problems for children of all ages.

Supplied on RISC OS CD-ROM, the Fun Learning Collection is priced at £14.90 and is supplied with full documentation, in a convenient DVD-style packaging.

Easy C upgrade

C programmers will be pleased to here that APDL and Proaction have released a major upgrade to their EasyC C and C++ compiler.

The program has undergone some major changes including :

- support for the more recent versions of the standard RISC OS libraries (for both C and C++ compilation)
- a significant number of examples are supplied on the disc
- new step by step tutorials have been added
- new C tutorials have been added
- Vigil (previously a separate product) is now bundled with the application

The upgraded pack contains a manual in HTML format on the CD-ROM together with all the updated materials. The new pricing structure is as follows:

- Easy C++ CD-ROM (incorporating all material above, and of course Easy C) - £19.90
- Easy C++ Upgrade (with all new material and Vigil) - £10.00
- Easy C++ Manual (new updated edition, also includes Vigil manual) - £12.00
- Easy C++ Manual (if bought at same time as program) - £10.00

Overseas orders will be subject to a £2.00 postage charge for the CD-ROM alone, £3.00 for the manual alone or £4.00 if manual is bought with the software.

To order or for further details of both packages, contact APDL on 020 8778 2659, email info@apdl.co.uk or write to APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN.

JPEG Thumbnails

Precedence Technologies Ltd have released TinyThumb v1.00 which will generate a series of thumbnails from a directory of JPEGs (optionally recursing). The thumbnails all have the same configurable width or height. In addition, TinyThumb can generate a series of HTML pages showing the thumbnails, but with links to the original version.

TinyThumb is particularly useful for use with digital cameras as they can often produce very large images with cryptic filenames which can take a long time to search through if you want to locate a certain photo.

TinyThumb is free and can be downloaded from: www.precedence.co.uk/downloads/tinythumb/

Precedence point out that owners of Precedence NetManagers with TotalBoot will automatically get this software as part of the automated upgrade system.

Cerilica sell out of Vantage

Cerilica reported such a demand for the re-priced Vantage package, they had sold out of copied by lunchtime on the first day of the Wakefield show!

The Wakefield show saw the launch of Vantage's on-CD electronic manual format. The CD now contains three PDF full manuals. This change in product format has allowed the base price of Vantage to drop significantly from the previous £241.50 to £177.50 (UK, including package, postage and VAT).

For those who prefer to read a physical manual, the option to purchase the 230+ page item is still available at £25.00 (UK, fully inclusive). This option is especially attractive to German-language customers who are now able to purchase a fully translated and printed manual exclusively from Cerilica's German distributors, a4com.

All existing customers of Cerilica Vantage will gain full access to the forthcoming major release, Vantage 1.10 which was previewed at Wakefield. More information on the upgrade along with some new sample images may be found on Cerilica's web site.

Cerilica Limited, PO Box 40, Ross-on-Wye, HR9 7WH, England Tel: (UK) 0870 2411731 e-mail: cerilica@cerilica.com **Web: www.cerilica.com**

DiscKnight

The ARM Club is pleased to announce that DiscKnight is once again available for purchase by credit card from their web site following the collapse of their previous credit card hosts. Orders are processed within 24-48 hours and the software delivered by email.

www.armclub.org.uk/products/discknight

DiscKnight is a repair tool for standard and RISC OS 4 format hard discs, with file recovery and backup features. A free checking-only version is available for download from the URL above.

Pace slash jobs

Pace Microtechnology have culled almost 50% of their engineering staff at their ex-Acorn Cambridge office. Nearly 28 engineers were given their notice, out of 58 engineers at the site. There will also be up to 8 job losses at management and team leader level. Pace, who are suffering badly from the aftermath of the Digital TV fiasco after making over optimistic predictions on how many Set Top Boxes the likes of ITV Digital (formerly OnDigital) and NTL would be buying from them.

With the collapse of ITV Digital, and NTL restructuring following massive losses, Pace are tightening their belts and cutting staff. It's not yet know whether the majority of engineers are former Acorn employees, however the drastic reduction in development staff means the future of RISC OS within Pace looks uncertain, with the majority of their products now based upon a Linux STB.

Omega news

Those with Internet access may have noticed the recent flurry of activity on the Microdigital Web site. Their news pages are been updated almost daily and are becoming somewhat of a news portal in themselves.

Dave Atkins, the man behind Microdigital and the Omega has posted various snippets of information as the progress of the much sought-after piece of hardware. According to the site, they have a development version up and running RISC OS 4 with applications such as Cerilica Vantage. A preview of the mythical beast has also been given to Dave Holden of APDL, although Microdigital are not planning on any further private viewings so those living locally can put down those telephones.

Castle announce USB cards

Castle have announced a USB podule supporting 4 USB 1.1s slots. Showing pre-production copies at the Wakefield show, the cards software is still in an early stage of development, but is based upon the work Pace did on a DeviceFS-based API.

The release, although welcome in the RISC OS world, is somewhat confusing for developers as there are now two differing USB APIs, the Simtec one being the other and the one also used in the Riscstation portable. Whether Castle and Simtec can come to an agreement on a common API remains to be seen, but it has to be asked whether a market the size of this can support two vastly differing standards for USB devices. Microdigital seem to be sitting on the fence, perhaps awaiting an overall "winner" before deciding on whose APIs to support in the Omega.

The details of the Castle API and example software can be found at www.castle.uk.co/support/usb/ while the Simtec offering can be found at www.riscos-usb.org/

ARM news

Stephen Furber, one of the original designers of the ARM processor and developer of the asynchronous ARM processor, has been made a Fellow of the Royal Society. Furber, Professor of Computer Engineering at the University of Manchester, was cited for "his fundamental contributions to the design and analysis of electronic systems, especially microprocessors".

Meanwhile, Broadcom have licensed several ARM processor cores for use in their own products. This may come as no surprise to some, as Broadcom purchased Element 14, the company formed by Stan Boland after Acorn was split up and its assets sold to Pace. Element 14 kept many of the original Acorn management, including Sophie Wilson, another of the original ARM design team, who now work for Broadcom.

ARM seem to be on a roll, announcing they will have shipped their billionth processor core in June and that Microsoft are porting their Smartphone 2002 operating system to the ARM10 platform.

Business and other news

Hewlett-Packard has developed a method to cool computers using inkjet technology. Microscopic inkjet nozzles squirt streams of Fluorinert, a non-corrosive coolant that does not conduct electricity, onto the surface of semiconductor chips. An array of the jets can be turned on and off precisely to cool particular hot spots on a chip efficiently.

HP is planning to package the new cooling system in snap-on devices that would replace the passive air-cooling metal fins that now sit atop Pentium and AMD microprocessor chips. The device includes coolant recovery pipes. Commercial versions could be ready by 2005.

Heat is a growing problem in the PC world as each new generation of chips crams more transistors onto stamp-size silicon dies. Power densities, which are now 60 watts per square centimetre, are expected to reach 200 watts by 2003. More transistors means that more heat has to be dissipated.

There have been a number of approaches to cooling chips including water jackets used in old IBM mainframes and onboard refrigeration units. Transmeta, a company who produce low power x86-compatible processors has a different approach to silicon-based heat. They move the microcode that's normally in silicon off the chip and into software. It's cooler, but slower. And our own StrongARM technology uses a RISC instruction set with requires fewer transistors thus dissipating less heat.

The inkjet idea is interesting because it's a re-purposing of existing and well-understood technology. Any product that builds upon the past has an advantage, because its time-to-market is generally quicker than a revolutionary product.

Need access to a PC but don't have space for a new monitor, keyboard and mouse?

Now With FREE VIRTUAL ACORN INSIDE

STEP 1 - Specify a PC base unit if you don't have one al

We can supply off-the shelf or custom PC base units to your requirements.

eg:
- Duron 1.1GHZ CPU. 128MB memory. 40GB hard drive. CD drive. 8-64MB graphics £499inc VAT and Delivery

- Athlon XP 1800+ CPU. 256MB DDR . 60GB ATA133 hard drive. DVD. CD rewriter. Geforce 2MX400 graphics £799inc VAT & Delivery

All machines come with internal modem. our Multimedia Keyboard. Wheel mouse and Loudspeakers.

- Windows ME or XP. add £80inc VAT. MS Works. add £20inc VAT.

STEP 2 - Add our Keyboard Controlled Switch

This miniature switch allows keyboard. monitor and mouse to be shared between two machines.
Modified for RISC OS macines. rated to 1920x1440 display. complete with all cables.

- Supplied as a pack including our PS2MouseMini interface : £99.95inc VAT (Was £113.90)

- Above pack when purchased with PC base unit: £90inc VAT (was £100)

- Keyboard Controlled switch alone: £89.95inc VAT (was £99.95)
- PS2MouseMini Interface (allows PC mice to be used on RISC OS machines): £18.95

(not to scale - it's about the size of two kitchen machboxes!)

STEP 3 - Attach to your existing RISCPC/A7000 and monitor

Add a networking pack if required......
... and switch between the two with a couple of keypresses.

Mices! MMK! USB!



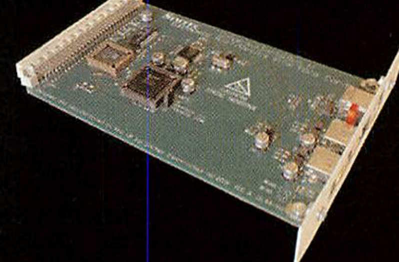
- STD Standard Mouse £19.95inc
(Acorn mouse port, PS2Mini not req.)
- 3 button PS/2 mouse £5.95inc
- Genius Wheel mouse £12.95inc
- Genius OPTICAL mouse £17.95inc

Non-A7000 machines require our PS2MouseMini interface £18.95inc.



- Multimedia Keyboard
- For RISC PC / A7000 etc
- 19 Multimedia keys
- Complete with Drivers
- Click/non click versions

£24.95 inc VAT (was £34.95)



- Simtec USB Card.
- Supplied with keyboard mouse and joystick drivers.
- Drivers for other devices Available.

£79+del+VAT = £99inc

Linux for Playstation comes to UK

Sony has started taking orders in Britain for a kit to turn the Playstation 2 games console into a computer running the Linux operating system. Besides Linux, the kit contains a hard disk, keyboard, mouse, monitor, and network interface. PS2 owners buying the kit should be able to connect their console to a home network or to the Internet. The kit costs £155 and buyers still need to provide a compatible monitor.

Solar cloth offers movable power

Textiles that incorporate solar cells could allow some travellers to dispense with batteries altogether. Scottish researchers believe that thin films of silicon on a glass substrate could be laid on clothing fibres prior to the weaving process. Improvements in cell efficiency might allow a patch on the back of a jacket, or the side of a bag, to power the Riscstation laptop or trickle charge a mobile phone.

Six arrested over "Nigerian" e-mail fraud

Six people were arrested in South Africa this month on suspicion of being involved in the infamous "Nigerian" e-mail and letter fraud. Potential victims receive an e-mail telling them that the sender is trying to move a large sum of money and offering them a substantial fee in return for letting it be deposited into their bank account. People who express an interest are then told that they must first hand over an amount of money to cover expenses. The scam is thought to have defrauded hundreds of millions of dollars from victims

NVM Digital plan it big

Readers may recall the excellent walking tours of the Lake District from NVM as reviewed in Acorn User, and their latest release will be reviewed in the August issue.

Although the Foot and Mouth crisis put a dampener on sales last year things are picking up again and NVM's director Dave Mulligan revealed that the company intends to do walking tour CDs to cover the entirety of the Lake District.

The RISC OS Academy

Paul Vigay, of ANT Utils and Argo support fame, is offering RISC OS users who are keen to learn programming skills the opportunity to enrol in a programming course, labelled "The RISC OS Academy". The course caters for learning programming skills on a variety of topics and at a choice of different levels.

People who dabbled with BBC Basic before but felt daunted by all the new facilities available in later versions of RISC OS will be ideally catered for, as will anyone who's just bought a RISC OS computer and wants to learn a bit more about how to program it.

Running a bit like a correspondence course, people can learn at their own speed and in their own time, with a complete set of internet based resources to help them - clearly written tutorial articles, program examples, possible problems worked through and even full applications. Help is provided via email, and each person can learn at their own rate.

Initially, 12 courses will be available (one fee gains entry to the entire Academy web site, so people can learn whatever they choose, when they choose). The course details are:

General info and conversion/refresher courses

1. What is RISC OS
2. Introduction to RISC OS
3. RISC OS for Windows users
4. RISC OS for Apple Mac OS users

Introduction to Programming courses

5. Introduction to RISC OS as a development platform
6. Beginners Introduction to BBC BASIC
7. Beginners Introduction to Wimp Programming
8. Intermediate BBC BASIC
9. Intermediate Wimp Programming

Introduction to HTML Web Design using RISC OS

10. Beginners Introduction to HTML Web Design
11. Intermediate level Web Design

Introduction to Internet Programming

12. Introduction to CGI programming using PERL

Future, more advanced courses, as well as courses on other topics are planned for the future.

The RISC OS Academy officially opens on 1st September 2002, and costs £50.00 per year (runs from the day you subscribe rather than Sep-Sep) or £75.00 for a family membership.

For more information, please visit The RISC OS Academy web site at **www.vigay.com/academy/**

RComp heard it on the Grapevine

RComp have a new release of their new instant messaging and communication program, Grapevine. As Grapevine is an evolving application, the latest release includes a number of improvements including:

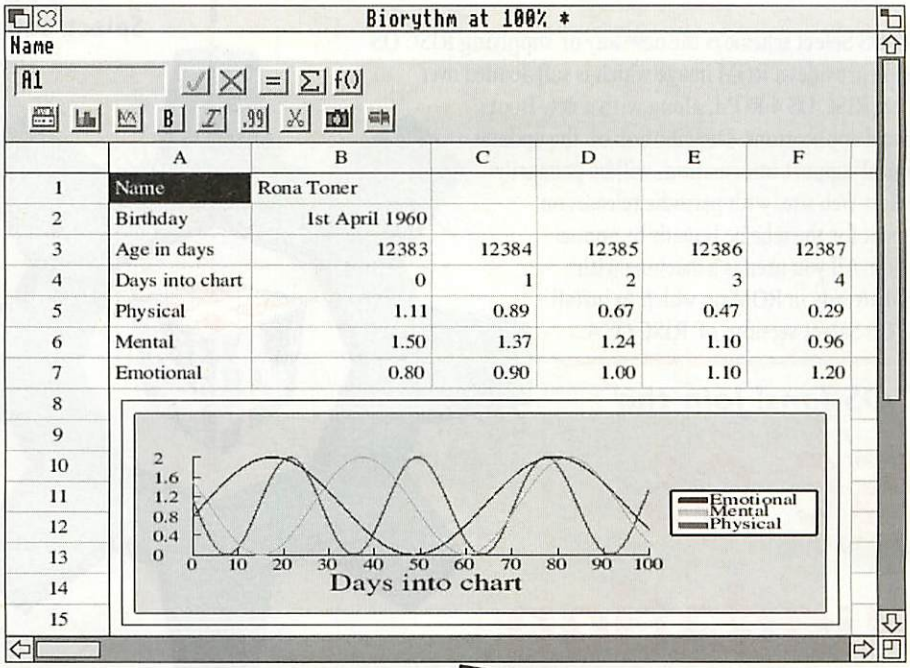
- Support for the WimpCTCP IRC extensions
- Support for the latest version of the MSN protocol
- New graphics to represent whether you are online with MSN and/or IRC etc.
- Connection animation to indicate activity during the connection process
- Ability to chose your default "status" when connecting
- Various extensions to IRC functionality including finger messages and implementation of several more CTCP functions.
- Several problems reported post-show have been rectified.
- Code to determine network addresses for DCC chat/file and other direct communication facilities expanded.
- More emoticons

Future plans include MSN File transfer and ICQ support. More information (and ordering) about Grapevine can be found at www.rcomp.co.uk and follow the Grapevine link.

The Scheme of Things

Clares are pleased to announce that their spreadsheet Schema 2 and special converter software SchemEx can be bought together for just £80 inc VAT + postage. SchemEx is the converter which allows you to import and export files in HTML format between Schema and Excel 2000/XP retaining all formulae, styles, colours and fonts.

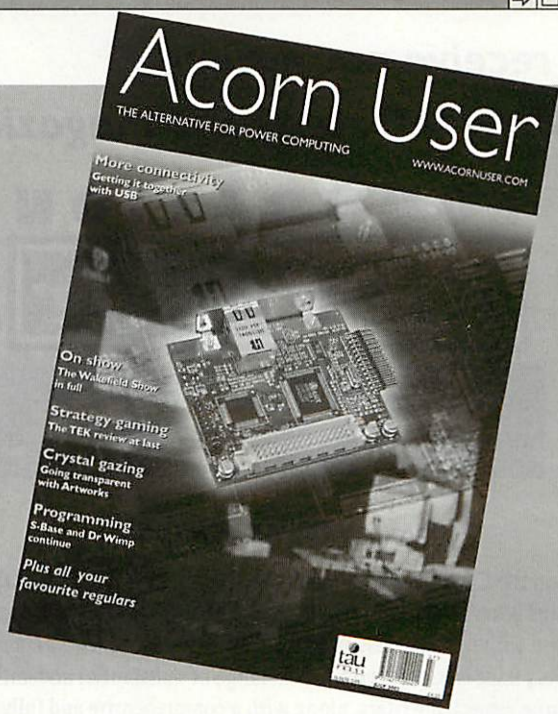
Clares Micro Supplies Ltd, 75a Webbs Lane, Middlewich, Cheshire, UK, CW10 9DS; Tel: 01606 833999; Fax: 01606 836111 **Web: www.claresmicro.com**



	A	B	C	D	E	F
1	Name	Rona Toner				
2	Birthday	1st April 1960				
3	Age in days	12383	12384	12385	12386	12387
4	Days into chart	0	1	2	3	4
5	Physical	1.11	0.89	0.67	0.47	0.29
6	Mental	1.50	1.37	1.24	1.10	0.96
7	Emotional	0.80	0.90	1.00	1.10	1.20

Buying Outside

If you are buying a product from a non - RISC OS supplier ensure you have the hardware or the drivers to run it.



RISC OS SELECT

Make the right choice for the future with

RISC OS Select

Keep up to date with every new version of RISC OS as it appears!

The **RISC OS Select** scheme is the new way of supplying RISC OS upgrades. It provides a ROM image which is soft-loaded over the internal RISC OS 4 ROM, along with a new Boot sequence and applications. Distribution of the updates, and technical support information, will be primarily via the Select Web site, with periodic releases on CD. Payment for the scheme is made by annual subscription. All you need is a machine with RISC OS 4 already in ROM on which to install the **RISC OS Select** versions of RISC OS 4.

RISC OS fans! Join the

RISC OS Foundation

and receive our ground-breaking quarterly CD magazine

FOUNDATION RISC User



Now entering volume 3!

Foundation RISC User is a truly innovative publication from RISCOS Ltd that supports the heart of the RISC OS market. The magazine articles combine useful information with software resources that can be launched with a simple click on a link. Every issue is packed with a wide range of substantial and authoritative features from respected writers, along with a comprehensive and fully integrated database of current RISC OS products, developers and user groups. Altogether, it's arguably the most innovative and high quality CD magazine on any platform.



What does the Select scheme provide?

By joining **Select** you will receive the following benefits:

1. Periodic updates via the **Select** private Web site.
2. Up to three CDs per year, containing the latest version of RISC OS plus optional beta-test copies of software components in development. Every CD will be bootable and contain a full, working disc image that allows the easy selection of different boot sequences.
3. The right to upgrade up to **ten** RISC OS computers at one site. **Select** is a personal scheme: you only need one subscription even if you own several machines. However, RISC OS 4 is needed for each one: **Select** cannot be used with RISC OS 3·7 or earlier.
4. **Affiliate Registered Developer** status: if you are a programmer, joining **Select** entitles you to become an Affiliate Developer for no extra charge, and have your products included in the Database section of **Foundation RISC User** magazine and on the Web site.

RISC OS 4 upgrades and Select scheme prices

Subscriptions to **Select** are available on an annual basis, and may be purchased in combination with a RISC OS 4 upgrade.

RISC OS 4 upgrade plus Select subscription:	**£179**
RISC OS 4 upgrade only *(new low price!)*:	**£109**
Select subscription only: *(for existing RISC OS 4 users)*	**£105**
Select subscription only: *(for Foundation members)*	**£99**
Select group subscription: *(for sites with more than ten machines)*	**£300**

All prices above include VAT.

Please see our Web site for further pricing details, overseas prices etc.

Testimonials from readers of Foundation RISC User

- "The interface is very friendly and better than my perception of what a CD-based magazine would be like!"—*Andrew Weston*
- "The whole CD is a joy, and something our platform can be proud of."—*Geoff Steeper*
- "The Foundation CD has contradicted my opinion that I wouldn't be able to read a CD magazine happily. It's very nicely laid out."—*Fred Bambrough*
- "Congratulations on Foundation RISC User… it works smoothly, looks good and has masses of useful and interesting content."—*Gavin Wraith*
- "Keep up the excellent work! (And what I REALLY appreciate is someone who can write, spell, talk sense, and knows his its-es and it's-es!)"—*Jeremy Roberts*
- "It's a really excellent job."—*David Pilling*

Sample Foundation RISC User Online!

Visit our sampler edition, **Foundation RISC User Online**, at **http://foundation.riscos.com/fru.htm**

FOUNDATION RISC User ONLINE

Beat the price rise! Join the Foundation or renew your membership by 31st May for just £35·25 (£30 ex. VAT)

From 31st May, prices will increase as follows:
UK: **£33**+VAT (£38·78); EC: **£35**+VAT (£41·13);
Non-EC countries in Europe: **£35** (no VAT);
Postal Zone 1: **£37** (no VAT); Zone 2: **£39** (no VAT)

RISCOS Ltd
3 Clarendon Road
Cyncoed, Cardiff
Wales CF23 9JD

Tel. 02920 492324
Fax 02920 492326
www.riscos.com
sales@riscos.com

July 31st Deadline

BEAT MICROSOFT MONOPOLY

Microsoft licensing explained

Software Assurance is a simpler way of obtaining the latest Microsoft products. Microsoft Licence and Software Assurance is a model available through the Open Licence and Select volume-licensing programmes, which allows you to use the latest release of software during your agreement coverage.

What are the benefits?

- You receive rights to new product versions released during the term of coverage, taking the guesswork out of budgeting for software upgrades.
- You choose when to deploy the latest versions of Microsoft software, giving you flexibility and control.
- You can be confident in the knowledge that you are fully licence compliant, since you own the rights to run the latest versions of the products you use during the term of coverage, and any prior versions of enrolled products.

How it works?

- For Open or Select licensing Customers
- If you purchase a new Licence and Software Assurance (L&SA) through the Open or Select volume-licensing programmes, you receive the right to run the current version of the product as well as any new versions released during the term of your agreement coverage. (2 Years)
- For Boxed Product and OEM Customers
- If you have a current version of a Microsoft product now, order before 31st July 2002 for Software Assurance only. You then have the right to use any new versions of the product that is released during the term of your coverage. (2 Years)

Why did Microsoft introduce this programme?

Microsoft is responding to customer and partner feedback. Licence and Software Assurance was developed to simplify matters because:

- Microsoft licensing programmes were complex and offered too many licence types.
- The administration of licences was too time-consuming for customers.
- The required level of understanding for Microsoft licensing was too high: 'I don't mind being a technical expert, but I do not want to be a licensing expert.'

Licence and Software Assurance addresses these issues and offers:

- Increased simplicity in managing volume licences.
- Straightforward and predictable IT budgeting.
- A licensing model that is easy to understand - customers no longer need to be licensing experts to ensure they are properly licensed.

Definitions

Microsoft Open or Select Licence
Microsoft Open 'B' and 'C' as well as Select Licence products are divided into three categories or product pools: Application, System, and Server. Each product from each pool is allocated a point value by Microsoft. Licences can be obtained from each particular pool and can be added together within the pool to help reach a higher discount level (except NL which mixes the pools).

The Open and Select Licence programmes offer tiered pricing, based on initial order quantity. The higher the volume the greater the discount. The discount level is applied to any additional orders made throughout the following two-year period, with no minimum re-order level.

Upgrade Advantage
This is a very useful Microsoft licensing program, but it only runs until the 31st of July 2002 and will not be available after that. By purchasing Upgrade Advantage before the shut off time for each of your Microsoft products you will be eligible to free upgrades and to run the very latest products (or your earlier versions) for the next two years. This applies to all business users - whatever form of Microsoft software licensing you have currently (Boxed, Open/ Select licensing, older style paper licences, or OEM).

Software Assurance
This is a simpler way of obtaining the latest Microsoft products. It is only available now for customers working on the current release of Microsoft products (Office 2000, Windows 2000 & Server 2000 products are considered current - but only up to the 31st of July). After this point, products would need to be covered by Software Assurance to get any upgrades licensing is dicontinued from 31st July 2002

OEM
Original Equipment Manufacturer software is produced to be supplied with hardware and can be enhanced by both Upgrade Advantage or Software Assurance as it enables the user to keep their software on latest releases.

Keynote for Open & Select Licensing
After the 31st July 2002 you will no longer be able to 'upgrade' to the latest version of a Microsoft product (i.e. upgrade licences will disappear in Microsoft Open and Select licensing programmes). You will have to buy the full licence (if you are not already enrolled in the Upgrade Advantage or Software Assurance programmes).
Corporate Software 0870 870 7778

Corporate Software launch new e-Learning Division

E-learning is the economical training solution for the future. It provides many additional benefits over traditional training methods.

What is e-learning?

E-learning is training delivered via a company network, the Internet or CD. Corporate Software offer a library of over 850 courses that are rich in multimedia content (contain a mixture of sound effects graphics pictures and video clips with text and voice tracks as well as animation). We also have the facility to write custom content courses to your requirements.

We can install a complete library tailored to your needs often for less than £100 a user for a full years training on up to 600 courses when delivered on a larger scale (500+ users).

Advantages of e-learning

- Staff can study at different times and without the need for expensive training facilities.
- Staff can study at their own pace thus can really get the most from their training
- The content of the courses (video clips and pictures as well as animated demonstrations) allows better comprehension and understanding.
- The cost savings over traditional training are immense
- Allows home-workers and road-warriors to attend training (as we use a patented streaming technology that allows even a 28kbs modem to deliver a quality multimedia course)

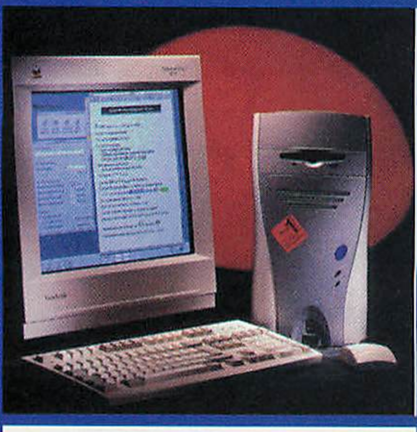
For full information on courses offered please call one of our e-learning representatives 0870 870 7778 or email einfo

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RiscStation Computers

R7500 Lite	£598.00
R7500 Lite+	£656.75
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R7500 NetWorx HD	£539.30
R7500 Scorcher	£797.50
R7500 Scorcher Twindeck	£833.00
Osaris	£180.00
Osaris Plus pack	£210.00
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Risc PC 16+2Mb, 4Gb HD, 48x CD	£1039.00
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iiyama Vision Master 406 (17" SF)	£241.20
iiyama Vision Master 407 (17" SF)	£241.20
iiyama Vision Master Pro 1411 (17" NF)	£188.25
iiyama Vision Master Pro 413 (17" HBNF)	£226.25
iiyama Vision Master 1451 (19" FST)	£206.00
iiyama Vision Master 452 (19" SF)	£300.50
iiyama Vision Master Pro 452 (19" NF)	£375.75
iiyama Vision Master Pro 453 (19" NF)	£321.50
iiyama Vision Master Pro 454 (19" HBNF)	£486.00
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iiyama Pro-Lite 3835 (15" LCD)	£475.25
iiyama Pro-Lite 4314 (17" LCD)	£573.00
iiyama Pro-Lite 4315 (17" LCD)	£657.50
iiyama Pro-Lite 4332 (17" LCD)	£771.50
iiyama Pro-Lite 4611 (18" LCD)	£782.50
iiyama Pro-Lite 4636(18.1" LCD)	£894.00
iiyama Pro-Lite 4637 (18.1" LCD)	£975.50
iiyama Pro-Lite 4831 (19" LCD)	£1445.00

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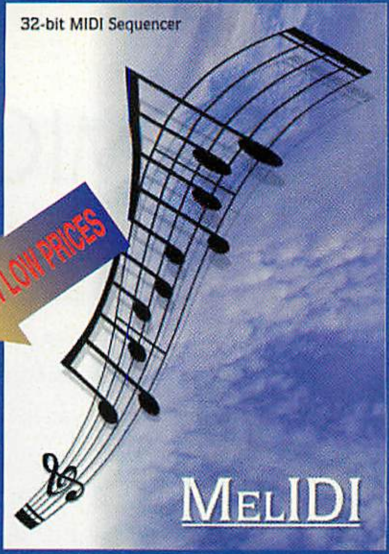
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Registered Developer RISCOS 4

TDK

Discs (e.g.20x black discs – £6.28)
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Please call to check current prices.
Risc PC/A7000/RiscStation/Mico SIMMs:

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32Mb EDO (HC, works in Risc PCs)	£26.75
64Mb EDO (works in Risc PCs)	£39.00
128Mb EDO	£77.55
2Mb VRAM	£92.00

Music & Sound Section

Please call for other musical items
MIDI interfaces:

MIDI Max II internal 1x1x1	£93.95
Parallel Port 1x1x1 (back in stock)	£92.95
RiscStation MIDI drivers & cable	£17.95
RiscStation XG card & cable	£116.95
RiscStation XG card, cable & keyboard	£245.95
Sibelius 6	£99.95
Sibelius 7 Student	£319.95
Sibelius 7	£520.95
Sibelius for PC/Mac is also available	
Sound module serial driver	£37.95

Other Hardware

10/100BaseT ethernet card (RCI/Simtec)	£89.00
Mouse (Genius/STD Acorn-compatible)	£19.95
Mouse (PS/2 Logitech)	£14.99
PS2MouseMini adaptor for older machines	£18.95
Printers	£Call
Risc PC second slice (no PSU)	£95.00
RISC OS 4 (fitting & Select available)	£109.95
RiscStation second serial port	£10.95
Scanners	£Call
StrongARM & RISC OS 3.7	£269.00
StrongARM & RISC OS 4	£299.00
ViewFinder card (32Mb)	£240.00

Other Software

Abuse	£20.00
CD Burn	£55.95
Chaos Engine	£19.50
DataPower 2	£165.00
Doom+ CDs	£30.00
Descent CDs	£25.00
Desktop Repton 3 CD	£15.95
DialUp & Messenger Pro	£54.95
EasiWriter Pro+	£139.95
FastSpool+	£17.50
Grapevine	£25.00
Heroes of Might & Magic 2	£32.00
Krisalis Collection Gold CD	£25.95
OHP 2	£37.95
Oregano CD	£57.50
Other Worlds CD	£17.95
Ovation Pro	£138.95
Personal Accounts	£44.00
Photodesk Olympic	£127.95
Prophet 3+ Pro	£179.00
Quake	£22.00
R-Comp Internet Suite	£68.95
Schema 2	£121.50
SiteWriter	£58.95
Sleuth 3	£65.95
Sound Plugin	£11.50
SVG Plugin	£11.50
Syndicate+	£26.50
TBA Games CD	£20.00
TechWriter Pro+	£209.95
TEK	£29.95
WebFX3D	£24.50

Books & Manuals

RISC OS Manuals CD	£29.95

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Display advertising

Like it or not, advertising is competition, and every advert is attempting to stand out from the crowd. In magazines, for example, each advertiser is competing for your attention, and if you're a small ad on a page full of small ads, the competition is fierce. The reader is confronted with a bombardment of information, and if you don't do something to make your ad distinctive in some way, the fickle eye will be drawn to more interesting fodder.

OK. Having depressed you about the cold facts of advertising, let's think about ways to get across more effectively through design. We're going to look at Display Ads, the cheaper end of the advertising market. Display ads are usually found at the back of magazines, often in among the small ads. There are two main aims you want to achieve with a display ad: to capture the reader's attention, and to convey your message as simply and quickly as you can.

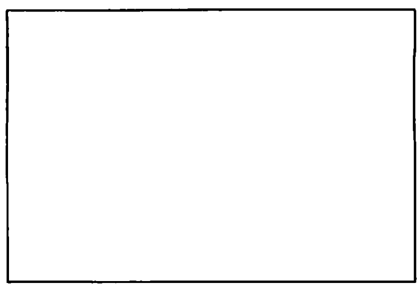
Look at a page of ads (you can use the Acorn User small ads), and see which ones you notice first. These are the most successful ones. From a design standpoint, there are ways you can increase your advert's notice-ability, for example with the use of white space. In a page of ads, your eye is often drawn first to ads with more white space. Ads with a sizable amount of white space also tend to evoke a more classy perception.

Of course, that then presents a different problem: the more white space you provide, the less area there is for conveying your message. Therefore, make your message simple and snappy. If you sell toilet seats, for example, a large headline which says "Super Toilet Seats!" might draw the reader's eye, especially if they're thinking of buying a toilet seat. You have simply said all that needed to be said, and all subsidiary information can be smaller, only accessible to those who are interested in pursuing the subject.

Let's take a specific example: we'll design a small monochrome display ad to be placed on a page of mono display ads. Let's say we have a business selling plant pots: Perfect Plant Pots. Before starting the design, you need to decide what your message is. What do you want to convey? Can you simplify it? Can you tease the reader with just a few words to draw them in to read more?

It could be simply that our plant pots are very good, and we'd like the reader to visit our Web site to find out more. Do we want an illustration? Well, in this case, we want people to see an example of our pots, so a taster illustration is not a bad idea. Finally, we want the reader to be able to get more information if required, so either supply a URL or contact details: telephone, e-mail, address if it's relevant. Now we should know WHAT we want to say, and it's time to think about HOW to say it.

First, define the shape and size. With



display ads, this is more or less defined for you; you'll be buying a square or rectangle, usually the width of a column. Let's say it's 40 x 60mm. Draw a rectangle the exact size of the ad (to get high accuracy measurements, use Drawbox - URL below - which keeps the outside dimensions regardless of line thickness). Look at this "blank canvas" for a while. Often an idea can form as the creative juices start to flow.

The next stage is deciding how to position information visually for the best effect. Take the heading first. The heading will either be your company name, or a short, snappy statement to invite the reader to investigate more. Our heading is both. "Perfect Plant Pots" is the name of the firm, and also nicely describes what we do, so that's our hook, our heading. Type it out.

PERFECT
PLANT POTS

A word about fonts. You have a wide range of fonts you can try. Change the font a few times, see what looks best. Be warned, though: many people use fancy fonts without considering how readable the result will be. Keep in mind that your prime concern is that the message can be read. If the font reads well and looks good, it's a bonus. The subsidiary information - contact details, and so on - can be displayed in a small font size; if people have had their attention grabbed, they'll seek out these details.

Once you've decided on a font for your



heading, place the heading in your box. Move it around, resize it, play with it. In our ad we have three elements: the logo/heading, the illustration and the contact details. Group the components of each of these elements so you can move them around like a jigsaw puzzle, trying various layouts. Resize the elements, change their positions.

In the example below I've gone for a centred design with plenty of white space on either side. The bare minimum of information is given: if people want to find out more, they'll phone or visit the Web site.

Bear in mind that although you have a monochrome ad, that doesn't mean you can't use colour. All shades of grey are available, and in the example below, the paper colour (white) is used as a second colour.

Your display ad has to jostle and fight for attention; give it the extra weight it needs to rise above the throng.



Nigel Gatherer
graphics@acornuser.com

Logitech Mice

Logitech Optical Mice	exc VAT	inc VAT
Wheel Mouse Optical PS2/USB	27.00	31.72
Wheel Mouse Optical with Acorn Adapter	39.00	45.82
MouseMan Wheel Optical PS2/USB	42.00	49.35
MouseMan Wheel Optical with Acorn Adapter	54.00	63.45
Pilot Wheel Mouse Optical PS2/USB	18.00	21.15
Pilot Wheel Mouse Optical with Acorn Adapter	30.00	35.25



Cordless Optical Mouse — Cordless MouseMan — Pilot Wheel Mouse Optical

Logitech Corded Mice	exc VAT	inc VAT
Mini Wheel Mouse PS2/USB	17.00	19.97
Mini Wheel Mouse with Acorn Adapter	29.00	34.07
Pilot Wheel Mouse PS2/USB	17.00	19.97
Pilot Wheel Mouse with Acorn Adaptor	29.00	34.07

Logitech Cordless Mice	exc VAT	inc VAT
Cordless Wheel Mouse PS2/USB	28.00	32.90
Cordless Wheel Mouse with Acorn Adaptor	40.00	47.00
Cordless MouseMan PS2/USB	46.00	54.05
Cordless MouseMan with Acorn Adaptor	58.00	68.15
Cordless TrackMan PS2/USB	39.00	45.82
Cordless TrackMan with Acorn Adaptor	51.00	59.92
Cordless Optical Mouse PS2/USB ***NEW***	38.00	44.65
Cordless Optical Mouse with Acorn Adaptor ***NEW***	50.00	58.75

Digital Cameras

Epson Digital Cameras	exc VAT	inc VAT
PhotoPC 2100Z (3.1 MegaPixel) - CompactFlash	305.53	359.00
PhotoPC 3100Z (4.8 MegaPixel) - CompactFlash	467.23	549.00



GV10 — QV2900 — QV3500 — QV4000

Casio Digital Cameras	exc VAT	inc VAT
GV10, 1.3 mega pixel, CompactFlash. *Watertight design*	237.38	278.92
QV2900, 2.11 mega pixel, CompactFlash, 8x optical zoom	351.25	412.72
QV3500, 3.34 mega pixel, CompactFlash, 3x optical zoom	316.25	371.59
QV4000, 4.13 mega pixel, CompactFlash, 3x optical zoom	450.00	528.75
Casio Camera Power Adaptor	29.00	34.07

Digital Camera Accessories

Digital Camera Media Card Readers	exc VAT	inc VAT
CompactFlash Parallel Reader with RISC OS Drivers	79.00	92.82
SmartMedia Parallel Reader with RISC OS Drivers	79.00	92.82
+ Add Photodesk's PhotoShow Software	20.00	23.50
+ Add Warm Silence Software's Win95FS	25.00	29.37

Long Life Digital Camera Batteries	exc VAT	inc VAT
5 Hour Charger with 2 sets of 4 AA 1500mAH Batteries	20.00	23.50
Additional 2 pack of AA 1500mAH Batteries	5.00	5.87

Digital Camera Media

SmartMedia Media	exc VAT	inc VAT
8MB	8.40	9.87
16MB	9.60	11.28
32MB	16.20	19.03
64MB	25.20	29.61
128MB	52.80	62.04

CompactFlash Media	exc VAT	inc VAT
8MB	15.60	18.33
16MB	13.20	15.51
32MB	18.00	21.15
64MB	27.60	32.43
128MB	49.20	57.81
256MB	90.00	105.75
340MB IBM MicroDrive	160.85	189.00
1GB IBM MicroDrive	288.51	339.00

TFT Displays

Iiyama TFT Screens	exc VAT	inc VAT
3817 15" TFT, 1024 x 768	335.00	393.62
3819 15" TFT, 1024 x 768, DVI-I, Optional Audio Upgrade	375.00	440.62
3835 15" TFT, 1024 x 768, DVI-I, USB, Rotation	419.00	492.32



3817, 15" TFT — 3819, 15" TFT — 3835, 15" TFT

4314 17" TFT, 1280 x 1024	469.00	551.07
4315 17" TFT, 1280 x 1024, DVI-I, Optional Audio Upgrade	525.00	616.87
4332 17" TFT, 1280 x 1024, DVI-I x 2, Video, USB, Rotation	615.00	722.62



4314, 17" TFT — 4315, 17" TFT — 4332, 17" TFT

4611 18" TFT, 1280 x 1024	649.00	762.57
4636 18.1" TFT, 1280 x 1024, DVI-I, Video, USB, Audio	699.00	821.32
4637 18.1" TFT, 1280 x 1024, DVI-I x 2, Video, USB, Rot'	765.00	898.87
4831 19" TFT, 1600 x 1200, DVI-I, USB, Audio, Rotation	1,160.00	1,363.00



4611, 18" TFT — 4636, 18.1" TFT — 4637, 18.1" TFT — 4831, 19" TFT

CRT Displays

Iiyama CRT Screens	exc VAT	inc VAT
Vision Master 1352, 15" CRT, 1024 x 768 @ 67Hz	91.00	106.92
Vision Master 1402, 17" CRT, 1024 x 768 @ 85Hz	125.00	146.87
Vision Master 406, 17" CRT, 1280 x 1024 @ 80Hz	179.00	210.32

We now accept credit and debit cards...

SWITCH — SOLO — MasterCard — VISA

Everything listed is RISC OS compatible!

CRT Displays

Vision Master 407, 17" CRT, 1600 x 1200 @ 75Hz	189.00	222.07
Vision Master Pro 1411, 17" CRT, 1024 x 768 @ 85Hz	135.00	158.62
Vision Master Pro 413, 17" CRT, 1600 x 1200 @ 75Hz	169.00	198.57
Vision Master 1451, 19" CRT, 1600 x 1200 @ 75Hz	165.00	193.87
Vision Master 452, 19" CRT, 1600 x 1200 @ 75Hz	230.00	270.25
Vision Master Pro 452, 19" CRT, 1600 x 1200 @ 75Hz	265.00	311.37
Vision Master Pro 454, 19" CRT, 1800 x 1440 @ 85Hz	285.00	334.87
Vision Master 505, 21" CRT, 1800 x 1440 @ 75Hz	480.00	564.00
Vision Master Pro 511, 22" CRT, 1800 x 1440 @ 75Hz	475.00	558.12
Vision Master Pro 512, 22" CRT, 2048 x 1536 @ 85Hz	545.00	640.37


VM 1402 17"


VM 1451 19"


VM 505 21"


VM Pro 512 22"

Printers

Epson Colour Laser Printers	exc VAT	inc VAT
AcuLaser C2000PS, 600dpi, 20ppm mono, 5ppm colour.	1,672.50	1,965.19
AcuLaser C2000PSDT, with Duplex and extra paper tray.	2,468.75	2,900.78
AcuLaser C4000PS, fast postscript network colour laser.	2,395.00	2,814.12


Epson C2000PSDT Colour Laser

Fast Colour Laser Printing from RISC OS!

The superb Epson AcuLaser C2000PS PostScript Colour Laser Printer provides wonderfully clear and crisp colour prints directly from RISCOS.

Starting at just £1,672.50

HP Laser Printers	exc VAT	inc VAT
HP LaserJet 2200D, 1200dpi - 18 PPM - Duplex	573.85	674.27
HP LaserJet 2200DT, as 2200D with additional paper tray	700.35	822.91
HP LaserJet 2200DN, as 2200D with Network Interface	688.85	809.40
HP LaserJet 2200DTN, as 2200DT with Network Interface	948.75	1,114.78
HP LaserJet 4100, 1200dpi - 24ppm	803.85	944.52
HP LaserJet 4100N, as 4100 with Network Interface	1,033.85	1,214.77
HP LaserJet 4100TN, as 4100N with additional paper tray	1,148.85	1,349.90
HP LaserJet 4100DTN, as 4100TN with duplex	1,378.85	1,620.15

HP Colour Laser Printers	exc VAT	inc VAT
HP Colour LaserJet 4550, 600dpi, 16PPM Mono, 4 PPM C	1,378.85	1,620.15
HP Colour LaserJet 4550N, as 4550 with Network Interface	1,608.85	1,890.40
HP Colour LaserJet 4550DN, as 4550N with duplex	2,472.50	2,905.19
HP Colour LaserJet 4550HDN, as 4550DN with 128MB	2,655.00	3,119.62

Projectors

Phillips	exc VAT	inc VAT
cSmart, SVGA 1000 ANSI Lumens	1,602.00	1,882.35
cBright, SVGA 1500 ANSI Lumens	1,993.20	2,342.01

SONY XGA Projectors	exc VAT	inc VAT
CX10 XGA 1200 ANSI Lumens (ex-demo)	2,064.25	2,425.49
CX11 XGA 1500 ANDI Lumens	2,792.20	3,280.83

Scanners

Epson SCSI Scanners	exc VAT	inc VAT
Perfection 1640SU (1600dpi) USB/SCSI	211.91	248.99
GT7000 (ex-demo) SCSI	70.00	82.25


Epson Perfection 1640SU Scanner

The **Epson Perfection 1640SU** SCSI Scanner. Fast and easy scanning for RISC OS!

Starting at just £211.91
Twain Driver and SCSI Card are required!

Network Hubs and Switches

Netgear Switch	exc VAT	inc VAT
4 Port 10/100mbps Hub	20.00	23.50
6 Port 10/100mbps Hub	26.00	30.55
5 Port 10/100mbps Switch	45.00	62.50
8 Port 10/100mbps Switch	65.00	76.37
16 Port 10/100mbps Switch	120.00	141.00


FS105, 5 Port Switch


FS108, 8 Port Switch


FS116, 16 Port Switch

Network Interface Cards

Network Interface Cards	exc VAT	inc VAT
100mbps RISC PC/A7000 NIC	79.00	92.92
Design IT 10mbps RISC PC/A7000 NIC	94.00	110.45

Network Accessories

Network Accessories	exc VAT	inc VAT
1 Meter, CAT 5 Patch Cable (Blue)	1.93	2.27
2 Meter, CAT 5 Patch Cable (Blue)	2.10	2.47
3 Meter, CAT 5 Patch Cable (Blue)	2.70	3.17
5 Meter, CAT 5 Patch Cable (Blue)	4.34	5.10
15 Meter, CAT 5 Patch Cable (Blue)	17.15	20.15
30 Meter, CAT 5 Patch Cable (Blue)	28.00	32.90
Eicon Diva 1830 ISDN Router	229.50	269.66

Power Backup

APC UPS	exc VAT	inc VAT
700va iNet	196.80	231.24
1000va iNet	255.13	299.78
1500va iNet	350.40	411.72
2200va iNet	538.69	632.96

VGA/Keyboard/Mouse Sharing

A-Ten Console Sharing	exc VAT	inc VAT
4 Way Mouse, Keyboard, Monitor Automatic Switch Box	118.69	139.46
6 Way Mouse, Keyboard, Monitor Automatic Switch Box	243.75	286.41
8 Way Mouse, Keyboard, Monitor Automatic Switch Box	368.75	433.28
16 Way Mouse, Keyboard, Monitor Automatic Switch Box	868.75	1,020.78
Switch Box Bundled Lead, 2 x PS2, 1 x VGA	15.63	18.37

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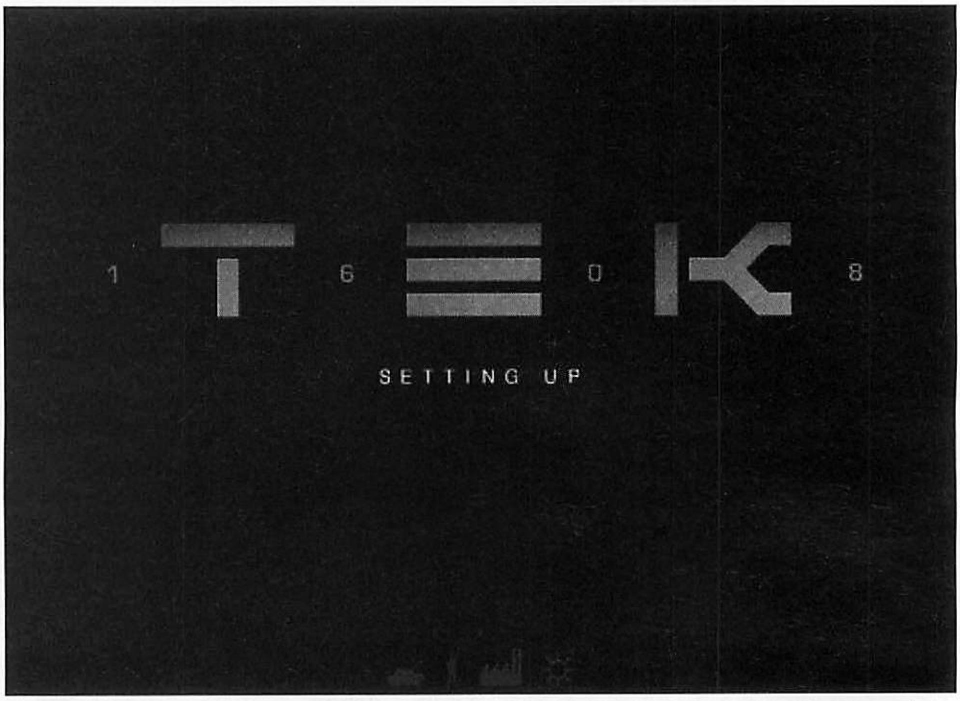
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Carriage charge is £5 for small items (less than 5kg), 65p per kg thereafter.

Tek: a new beginning



Medicine without frontiers
Like rather too many products in the RISC OS market at the moment, this one has taken rather a long time to come to market. On the other hand, like a lot of the promised products in the RISC OS market, it has arrived at last.

TEK is a realtime strategy game, it's not a shoot'em up so it should appeal to quite a wide range of people, it does require thought, concentration and probably more than one attempt at each level - well it did for me.

It is not hard to play as there is not too many different options, things are fairly logically structured, but the possible variations both in your decisions and in the different scenarios keeps the interest levels high.

Now we have had quite a lot of coverage of the game, how the graphics were done and so on but now we've had it in our hands and this is the realt thing.

What we have here is something that is similar in type to the Dune or Cannon Fodder strategy games, you have your forces and there are the opposing forces. You build up your power using energy production to create additional forces of different types and fight the opposing group which is doing exactly the same thing.

As you will have a lot of individual units under your control you are able to leave them to their own devices, give them instructions in terms of what actions to take, set them up in groups with a leader - then you only have to give instructions to the leader in order to get the entire group to act that way.

By careful deployment of your forces you attack and overcome the opposition in order to achieve your mission orders. At the simplest level this can be 'wipe out the opposition' but usually there is more to it: take over the buildings of the opposing force, build specific buildings and place them, and no doubt others IÕve not yet come across.

The scenario

Naturally a game has to have a scenario so here it is: The year is 2012 and multinational corporations have started to buy smaller countries so that the only purpose of the population is to work for the company. Apparently this brings peace and stops hunger, but it also wipes out individualism and national pride.

Four years later there is a global nuclear war which somehow manages not to wipe everyone out, the reason for this is the drug called SHOQ. This is needed to prevent death by radiation poisoning.

The corporations are still functioning but only two of them know how to produce SHOQ and in the nature of multinational corporations each one intends to have a monopoly. The two companies are New Health Corporation, run from Europe and the Yamamoto Star which, surprise, is Japanese. Note the refreshingly complete lack of anything American.

Each company possesses private armies intended to defend its SHOQ transports however the word 'defend' is used in its widest possible sense.

The history, as written by the European faction, is that NHC did have a SHOQ monopoly but the Japanese company stole it. In response Unit 1608 was created to protect NHCÕs SHOQ supplies and production. And you are in charge of Unit 1608 - and if you fail Yamamoto Star will have the monopoly instead and all the governments of Earth will be controlled by blackmail.

(The cynic in me wonders why this won't also apply to NHC, but this is only a game so I guess we have to be the ones in the White Hats and they have to be the ones in the Black Hats.)

Installation

The game itself comes on CD and needs 40Mb free on your hard disc for installation, it also needs the game in the CD as well because even with the 40Mb installation data is still read off the CD.

TEK is playable on anything from a machine running with an ARM7500 upwards, so that includes the Castle Odyssey, Riscstation R7500s, Risc PCs and so on. At least a StrongARM is recommended.

You put the CD in, double-click on the Install icon, drag the icon to the location on the hard disc you want the game installed and let it get on with it. There are other directories on the hard disc containing several other games including BotKiller and BotKiller2, Ankh and Exodus. You may have these already but if not they are a worthy inclusion Ñ I particularly like the BotKiller games.

There is also a manual, this has 28 pages and covers everything you need to know in a terse way, I did need to refer to it frequently at the start and, since you can't pause the game, this lead to my downfall on a couple of occasions.

I'll also mention at this point that there doesn't seem to be anyway to abandon a lost mission. There comes a point in a game like this, just as in chess, where you know that you can't win and there is no point in continuing. I could not find any obvious way of giving up. I could only wait until the enemy finally got around to beating me whicy could take a while.

Starting play

Launch the game in the usual way and pass quickly through the loading screens until you get to the main menu, you can opt to load a previously saved game or start afresh.

You can save between missions, there are probably just too many variables and settings to save a complete running game.

You can alter, as options, the size of screen that you play on, for less powerful processors a smaller screen is better, and also the sound volume.

In the standard installation you then choose between the beginners trial level and starting the real missions, there is an implication in the manual that further "campaigns" might become available.

The first battle

The beginning screen gives you command of four or five troop units. It's not clear exactly what these are, whether they are individuals, or indeed actually living - since they can be produced in a factory one must assume they are robots.

Using these you seek out and attack the enemy base which is not very far to the south east of you - I'm not really giving anything away there.

I really think that something more than this should have been provided because it really doesn't give you much in the way of scope for practice. However it could be argued that since you have to keep attempting the same mission again and again until you succeed the actual missions, as they build up in difficulty level, provide a training ground.

My view, as someone who gets very involved in this kind of thing, is that if I'm playing a real mission then it's a real mission and the tension level is so much higher. I just get really stressed out if I feel like I'm losing the battle for the whole world, you know?

Anyway how do we play? Each unit has a number of attributes, some are fixed: Armour, Speed, Weapon, Production Cost and perhaps a special ability.; Plus there are variable attributes: Energy, Loyalty, Morale and Experience.

You click with the pouse pointer on a unit to select it, you can use Shift+Select to add or subtract a unit to the currently selected ones. You can also drag a box on screen to select or de-select one or more units.

Selected units can be instructed to have different behaviour. Just clicking on the ground will cause the selected units to head to that spot, this is pretty much all you need for the training mission. Alt+Click tells all selected units to fire at the point targeted.

Click Menu to pop-up a graphical menu which allows you to assign tasks to the unit. These are usually: Wait, Guard - you specify which unit should be guarded it can be one that is moving; Search area, the unit travels round the area selected looking for enemies; Patrol, you can set up patrol routes (from a separate window) and here you can assign it; Quiet or Aggressive, in Quiet mode the unit will shoot at enemies but not move towards them, in Aggressive mode it will move.



Under certain circumstances there are additional icons: If you have multiple units selected you have an icon to make the current unit into the leader for the selected group; from then on you only need to give that one orders for the rest to follow.

You can create extra camera windows, if the unit being clicked on is in a camera window you get an icon which will make that camera track and follow that unit. Best used on the leader of a group, or on a unit that has been sent to scout an area so you can see what it sees.

The Transporter unit also has its own icons to instruct it to load or unload cargo.

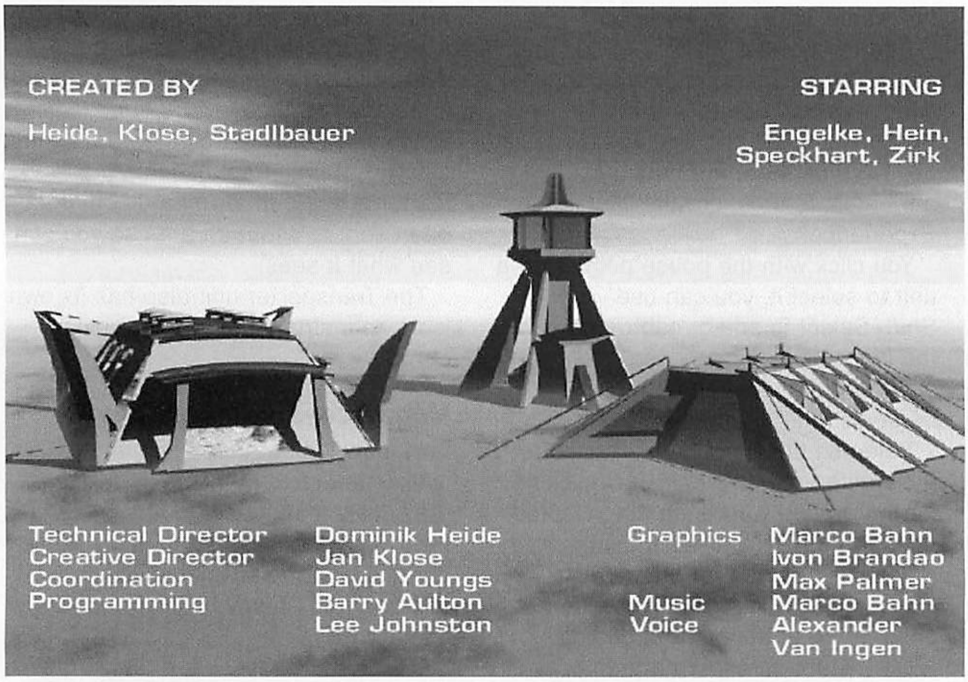
What toys you can have

Let's now look at the actual units available and what they can do. As previously mentioned you have the basic Trooper, low armour, slow, light gun but with the special ability of capturing an enemy building - critically important.

Ghost and Cossack are tanks, the former being heavier and slower, but better armoured than the latter. the Dervish is the jeep with good speed, medium gun but little armour. An alternative to that is the Bloodhound which is a walking battle machine with the same cost (unless that's a typo in the manual, I never got to build one) but a better gun and better armour.

One feature of the game is that there are terrain objects which can obscure the view and even if you have mapped part of the landscape, only if you have units in an area can you see what's going on there.

I mention the terrain because the above units are limited by what they can travel over. When it comes to the Drone, Angel and Raven those limitations do not apply. The Drone has no weapons and little armour but is a cheap, fast scout. The Angel has a light gun and some armour, it can be quite devastating because it can fly straight to your HQ and start taking pot-shots. The Raven is slower with more armour and a heavier gun.



There are two fixed guns which you can build and transport to their proper location, Guardian and Defender. Not too expensive to produce and certainly a necessary option for fortifying your bases and advanced positions.

Real estate

Apart from the combat units there are also some types of building that you can create, and these are critical to the game.

The most important two are the Factory and the Hauling Plant. The latter is the energy generation unit and the more you have working for you the faster you will be able to build new buildings and units. Similarly the more of these that the enemy has active, the more energy he will have to build the opposition.

Most buildings, particularly the Hauling Plants and Factories, can be occupied by the enemy - and the enemy ones can be occupied by you. You simply shoot at them until they turn grey and send in a trooper at which point they are yours and any power from a Hauling Plant goes to you instead of them.

As you can see it is quite important to locate and capture the enemy's Hauling Plants as soon as you can, far more important than destroying or capturing their factories.

So other buildings include the Repair Station, which can re-energise damaged units; Headquarters, lose that and you've lost the game but you can build another to work from, you must have at least one; Radar buildings can be used to see further.

The Factory works like this: You have an energy store and in any particular mission there will be a set of blueprints for units and buildings that you can have. You select an object to construct and the factory starts, you can create a whole list of items to build and in what order so you don't have to keep coming back to it.

More interestingly you can modify the blueprint of an existing object to create something new, you can change its weaponry, speed and so on. Then build it.

What's it like?

I found the training mission very easy, controlling the trooper units is not a problem but when I went into the first mission I did have a false impression of how easy it would be. I was wiped out three times before I could work out a strategy that seemed to work well.

Drones are irritating, they don't seem to be very good at obeying orders. It is definitely worth creating groups with leaders I found it easiest to think with a group of troopers and a jeep (sorry, Dervish) as its leader.

In the first mission (jungle/swamp based) you have to defend your HQ while attacking and capturing the enemy's HQ which is located fairly nearby but across a narrow causeway. Now that causeway caused no end of problems with my units who found it very hard to get across without my undivided attention directing them every step of the way. perhaps using the Wait command might have helped.

The mission advice says protect your own HQ, actually an all-out attack serves better. The enemy has a factory, you don't, you have to get over there, take over the factory and the hauling plants as fast as possible before he has time to build up troops for defence. Obviously the more firepower you take with you, the better.

In these circumstances the drone was useful (eventually) in scouting out the location of the hauling plants but also in being useful as an additional target. To be honest I can see definite mileage in creating a modified drone that is slower and has even less armour. All you need do is create dozens of them and set them off patrolling a specific defensive perimeter where they would act as cannon fodder if any attacking force happened to turn up.

Once I had got the hang of that mission it was easy but the next one was tougher. Here you are located in the desert with your own factory and you have to build and protect a second HQ while wiping out the opposition forces. You are in a position to build new forces rapidly but I hadn't learned the golden rule by the time I had to stop and write this review.

In this mission the enemy once again has a lot of hauling plants, you have to find them and capture them as fast as you can otherwise you will very rapidly be overwhelmed by the forces being built against you - and the enemy is very keen on using Angels against you. They come in fast and make straight for the factory and HQ. Very nasty.

Summing up

I really enjoyed this, I wish I had had more time to play it before writing the review. There is a lot of depth to it and I have really only scratched the surface. Buy it, you will have fun.

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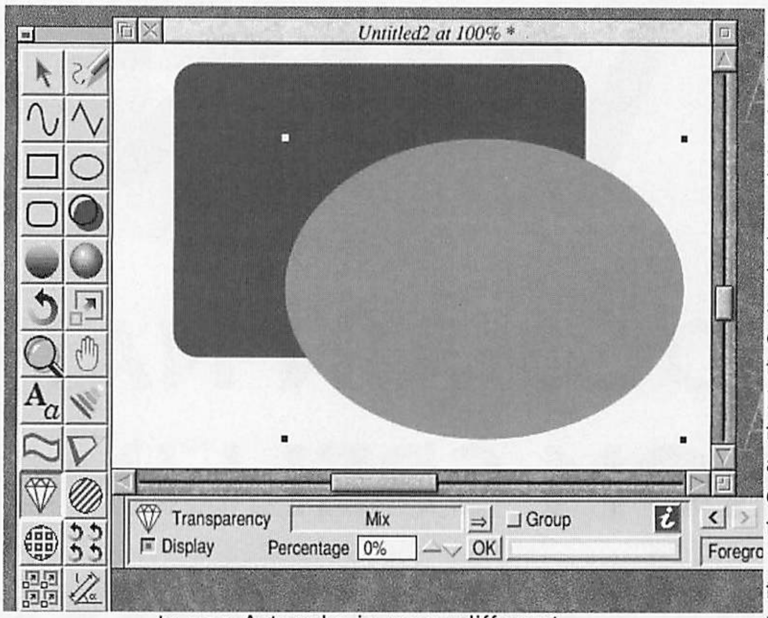
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Artworks: A new beginning

You've read the book now draw the picture! A couple of issues ago Martin Wuerthner, the new power behind Artworks. He explained his history with the program and how he had come to take over all its development and marketing.

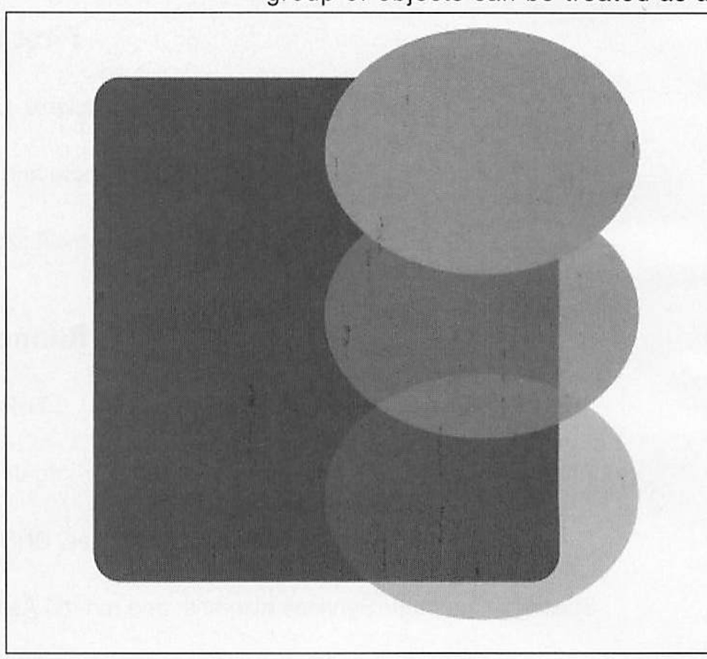
It's quite a story made all the more special by the fact that this program is over ten years old yet its basic design has meant that it could be expanded far beyond its original concept. Not unlike the main machine it runs on, the Risc PC. It is true there were some fatal problems; the dreaded "Clipping failed due to lack of memory" error when trying to export being, for me, the worst especially running with a machine that has over 80Mb of free RAM.

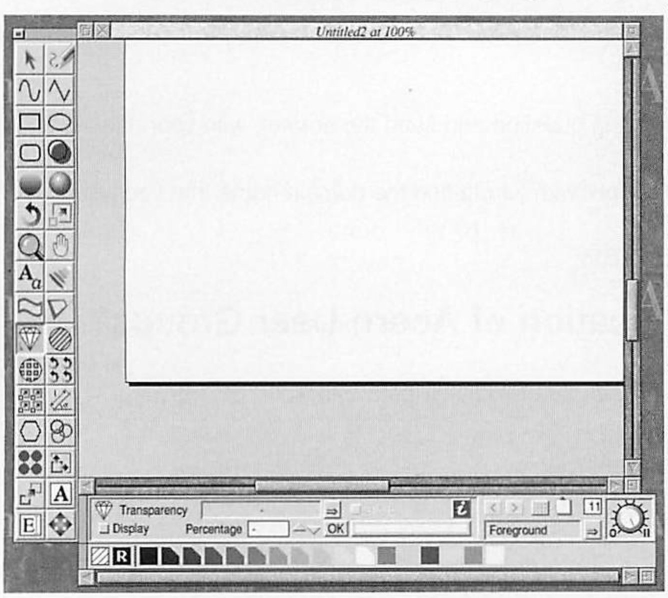


And the story isn't finished. I was not alone in thinking that, even with Martin's clever little modules that expanded the range of drawing tools, Artworks would be completely overshadowed by Cerilica's Vantage and driven into obscurity. But it hasn't been in fact the appearance of Vantage appears to have been the spur that has pricked Artworks development to even greater heights.

Working in the field of publishing, and even though I am very far from being an artist, I have had occasion to use Artworks in many different ways, from simple diagrams to huge multi-layered geographical maps. I've drawn street maps using a fast and effective technique I developed (though others may also have done the same of course); plus I have produced graphics for the Web. All this was just using the basic set of Artworks tools for the most part.

It's a good program and now it's even better.





As clear as crystal

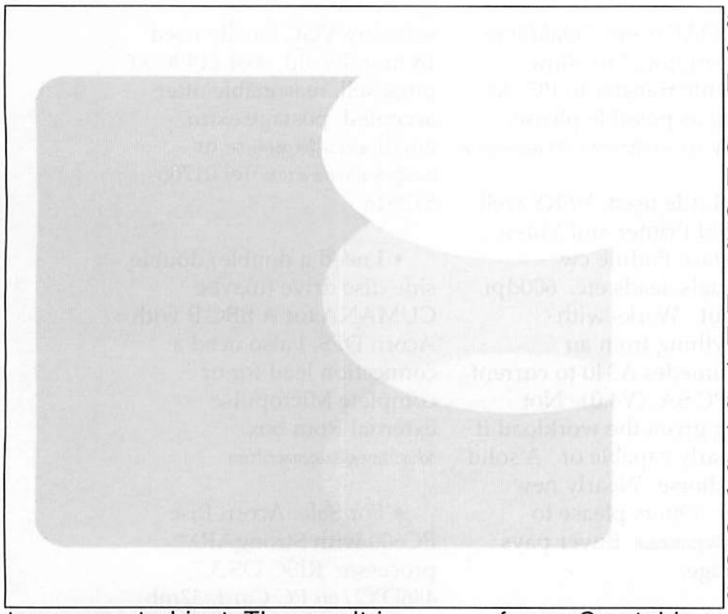
In this issue I am just going to examine the new Crystal module, next time I will go through the rest of the modules providing a brief overview of each and how they can combine with each other.

Figure I shows the full complement of new Artworks tools, with the Crystal tool highlighted and its toolbar showing below. Before taking a closer look at that we need to create two shapes to try out the transparency.

Looking at the toolbar now you can see a field with a menu attached showing "Mix" this is one of the three types of transparency available, the Display button switches transparency display on and off while Percentage controls the level of transparency.

The group button, as the help file tells it, provides a facility that no other program in the world does. A group of objects can be treated as a single item and have the same transparency level applied to it. This is different from each part of the group having its own transparency because in a complex drawing overlapping elements with individual transparency would probably look awful.

Anyway let's examine what we can do on the simple level. Figure III shows several levels of Mix transparency in our simple example. The Mix effect does a mathematical averaging between the object's colour and the one underneath. Figure IV is Stained Glass which simulates the colour underneath being filtered through the



areas, in fact the whole thing works beautifully.

The only exception are blends (from the original Artworks) and Martin's Replicates. In a blend you cannot have one part transparent and another part not, the transparency applies to the whole blended object, it is a group object automatically as far as Crystal is concerned.

Similarly the Replicates, which are essentially all the same object, can only have one level and type of transparency applied - I can't see this being a real problem.

transparent object. The result is always darker than the underlying colour as we are always filtering out, which is why I changed the bottom colour from blue to cyan Ñ the blue showed no difference at all.

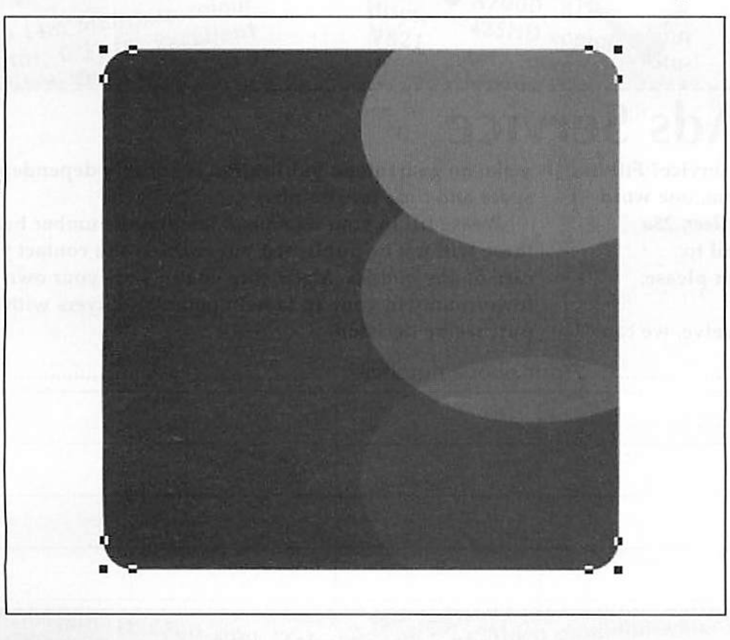
Finally (Figure V) there is Bleach, this is the opposite of Stained glass and adds brightness and colour as if you were shining lights on to a wall instead. This produces quite interesting effects with our chosen colours.

Although graduated transparency is not officially available it is possible to achieve as Figure VI shows, this is done by using a white to black gradation with either stained glass or bleach, the one in this diagram shows a black to white radial fill using bleach, which has no effect in the black area and produces a complete white-out at the edges.

Other modules

As you might expect, all of Martin's other tools will work with the transparency so you can create complex hatched objects which are semi-transparent overlaying other hatched objects in different colours.

Transparent objects can be distorted, text can be transparent, as can the newer text



Hardcopy

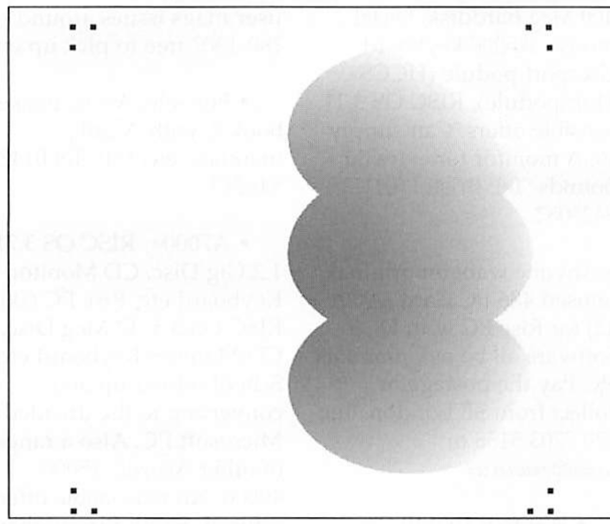
Printing is an issue because it is very hard to produce transparency output, not only because the RISC OS printer drivers aren't designed for it, but even Postscript printer drivers on other machines aren't really set up for this kind of thing. However Martin is a clever fellow and he has succeeded in persuading both non-Postscript and Postscript printer drivers to cope.

In the case of the latter the image is displayed as a bitmap image rather than a vector format Ñ it is the only practical way around the problem.

Portability

One of the key difficulties with earlier modules designed by Martin is the fact that you cannot display these images in programs like Impression or Ovation Pro, unfortunately this continues to be true although a future development of the AWRender module will probably allow transparency to work.

However you can use the export facilities of Artworks to create a bitmap image which can be imported into anything that will take a sprite (or GIF). This procedure works



without problems so you can create even more interesting images for your Web site.

Draw and EPS formats won't use the transparency option since neither format understands transparency.

Summing up

I can honestly say that this upgrade is truly brilliant, it was so unexpected and so well implemented that it suddenly makes Artworks a really useful program all over again. Well done.

Next month I shall get ecstatic over the other modules and the bug fixing upgrade.

Steve Turnbull
stevet@acornuser.com

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• Wanted: 100MB Zip drive, external parallel port type, also Argo drivers. Will pay £50 and collect within 50 miles of Bracknell. Richard 07956 624412 richarda.green@invensys.com

• For sale: (a) Acorn 1 A7000+ with inkjet printer. (2) Acorn 2 A3020 with scsi MEU inc cd rom drive. Both have monitors are in working order and are ex school systems. Offers please, purchaser must collect Stalybridge, Cheshire, England. E-mail acorns@rastin.com or text 0777 934 1383 I will reply to the best offers

• RISC OS 3 PRM's and other Acorn programming books. Free to pick up or 20 GBP. tel: Cheltenham (01242) 244227 - Chris. Also Acorn user mags issues around ?80-130? free to pick up only.

• For sale: Acorn pocket book 2, with A-link, manuals, etc. £50. Tel 01424 846213

• A7000+, RISC OS 3.71, 1.2 Gig Disc. CD,Monitor, Keyboard etc, Risc PC 600, RISC OS 3.5, 17 Meg Disc, CD,Monitor, Keyboard etc School selling up and converting to the dreaded Microsoft PC. Also a range of other Acorns A5000, 40000. No reasonable offer refused. South Birmingham area. Contact Mike on Mike.baggotthoc@talk21.com.

• OAP needs "OakDraw for Windows" to allow drawfile transfer to PC. As cheap as possible please. Reply to: john@hamiltonj51.freeserve.co.uk

• Little used, VERY well treated Printer and Video Interface Podule cw manuals, leads etc. 600dpi output. Works with everything from an Archimedes A340 to current RiscPC SA. (V4.0). Not being given the workload it is clearly capable of. A solid workhorse. Nearly new toner. Offers please to h.boyd@argonet.co.uk Buyer pays carriage.

• Surplus CDROMs Medieval and Tudor Hampshire reviewed issue 213. 400 copies £2k or smaller quantities negotiable. Contact david.bond@Hants.gov.uk Winchester Hants 01962846154.

• Clan optima NLE video system software and hardware package, has been unused. Can be upgraded in future requries SA RPC offers around £900 enquiries to aokai@tiscali.co.uk Merseyside area. K. Andersen - Tel 0151-547 3993

• Kinetic RiscPC 233Mhz 17" Ilyama monitor 10Gb HD, 52xCDRom, internet ready (RComp Dial Up) and software VGC hardly used 18 months old, cost £1490.00, must sell, reasonable offer accepted. postage extra, email verseau@ukgateway.net or louis@raynal.freeserve.co.uk Tel 01706 812516

• I need a double/double side disc drive (maybe CUMANA for A BBC B with Acorn DFS. I also need a connection lead for or complete Micropulse external Rom box dolton.hussey@btopenworld.com

• For Sale: Acorn Risc PC600 with StrongARM processor, RISC OS 3.7, 486DX2/66 PC Card, 32mb Ram, 1Mb VRAM, 3Gb Hard drive, 40x CD Rom drive and Mozart 16 bit soundcard. Bundled with various software/games including SimCity 2000 and Acorn Doom. £425 or nearest offer. Email : db@davidbaxter.co.uk Telephone 01524 69212 (evening) or 0777 3461099.

• WANTED URGENTLY: Acorn A4 portable. 2Mb or 4Mb, Any sized hard drive. Must have battery pack, all leads and manuals, etc. Willing to travel to collect. Good price will be paid. 07775 776217 anytime.

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Cut spam with MailScout

Scientists would have us believe that improvements in technology benefit mankind, but one aspect of the communications revolution that wastes resources and time, irritates people and damages their property is "spam", more correctly described as unwanted e-mail. As a postmaster of a small mail domain that receives around 200 junk e-mails a day, I can vouch for the time wasted and annoyance caused.

I have recently implemented some new automatic processing rules on the Arcade BBS E-mail gateway that have drastically reduced the delivery of this daily torrent of spam. Examining a typical selection of e-mail message headers, one finds that in almost every case, if an e-mail has been received for a specific username without the presence of the user's e-mail address in the To: field, the message will be unsolicited.

Using such a rule on its own to *automatically* eliminate unwanted messages works well, but there are occasions where this will remove valid messages, such as when the recipient is on a mailing list or in a group list, or where blind copies are used, and the mailout software scrimps on the way it addresses the additional copy e-mails. One answer is to use correctly-compliant software in the first place but that is usually out of the recipient's control.

Another way you can eliminate spam is to delete it manually from your ISP's mail server before it is sent to you. It's pretty easy for a human being to tell from the subject lines and the sender's address what is spam and what isn't, but much more difficult for a computer program. Many ISPs offer a Webmail service where you can list, read, reply to and delete e-mail that is waiting to be downloaded from their server. This can still be a time-consuming process with unwieldy Webmail readers such as that offered by Demon Internet.

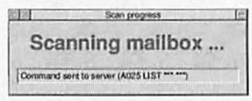
PC users have had applications to do this automatically for them for a while, such as Nick Bolton's MailWasher (www.mailwasher.net), which is a freeware mail server inspection program for Windows



(TM).

Now RISC OS users can use MailScout, which is a low-cost mail server viewer by Darren Windsor of Imagesoft, that examines the mail waiting for you at your ISP. It includes a filtering system that allows it to pick up suspected junk e-mails and flag them for deletion based on rules that use "kill words" applied to various header fields. MailScout's filtering allows e-mails to be scanned by subject, sender (including country, ISP, and so on) or recipient. Imagesoft are compiling pre-defined filters that will be downloadable from their Web site to make setting up easier.

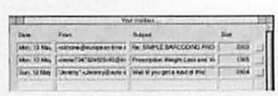
In use, MailScout is pretty simple. You click its iconbar icon to connect to your ISP,



and a connection status display is shown.

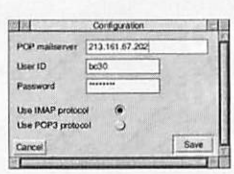
Dib dib dib - MailScout gets to work

MailScout lists the e-mails in your mailbox, showing those that it suspects are spams as ticked, and allows you to tick any others that you want to be deleted from the server. You confirm these deletions, and MailScout tells your ISP's mail server to junk the ticked e-mails. Then you can use your normal mail fetcher and reader to access your cleaned-up mailbox and download the remaining mail.



Dob dob bob - an AntiSpam badge is on the way.

MailScout can access both IMAP and POP3 mailboxes and only requires your mail server's address and your e-mail



username and password.

POP along to Image Software

MailScout costs just £25 including VAT and carriage, and you can order from Image Software by credit or debit card.

www.imagesoft.co.uk

E-mail :

customer.services@imagesoft.co.uk

David Dade
comms@acornuser.com

In brief

Get a NET100

The Simtec NET100 network card for RISC OS machines made its public appearance at the Wakefield Show. Commissioned by partners Stuart Tyrrell Developments, R-Comp and CTA/Riscstation, the NET100 is a 10/100BaseT full/half duplex RJ45 network card for RISC PC and A7000 series machines. Together with the recently released Castle Technology Network Podule card, these two products are the first new NIC designs since the demise of the Acorn-approved parts from i-cubed (though these are still being developed, manufactured and sold by Design IT) and ANT/Atomwide.

Designed and manufactured by Simtec for the partnership, the NET100 is a multi-layer PCB containing easily upgradable Flash memory-resident software with additional space for users' own modules which can be simply installed by drag-and-drop. The price reflects the development costs and relatively small production run compared to PC products, but is similar to that of the original parts. The price of the NET100 is £89 including delivery and VAT.

Stuart Tyrrell Developments
www.stdevel.demon.co.uk

Heard it through it yet?

Grapevine is an Instant Messaging client for RISC OS being developed by R-Comp as an ongoing project but fully available product. There are several competing RISC OS IM clients around, including Angelo Melis' original Acorn ICQ and Russell Palmer's multi-protocol Natter. Grapevine is initially written to support the MSN service as well as the classic chat-room IRC (Internet Relay Chat) format.

R-Comp have designed Grapevine to be easy to set up and friendly to use, with as seamless as possible integration of Windows-style features into the RISC OS environment. There are plenty of configuration and control options too for the more technical and experienced IRC user. Just when you thought the Internet was just browsing the Web, Grapevine comes along to put you in instant touch with family and friends. Grapevine costs £25 inc VAT and UK delivery.

Grapevine from R-c

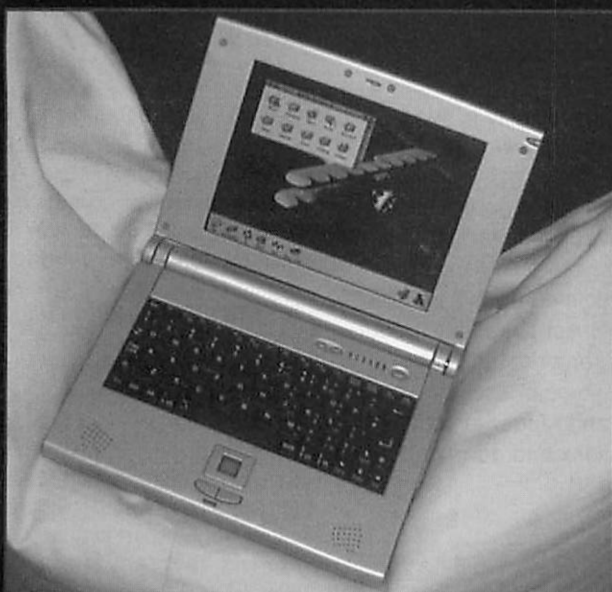
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Order your Portable now for only £1173.00 (£1465.00 with docking station) and get a free ethernet cable (up to 10m) plus free carriage.

No deposit required.
Exact price and configuration will be agreed before shipping.





FREE CARRIAGE!

Order your Omega now (from £1179.00) and choose any of the following offers :

Abuse	£20.00
Chaos Engine	£15.00
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Castle Technology USB Podule

Welcome to the first of our new series on USB, this will be a regular column, (though perhaps with different columnists), and will cover all RISC OS USB cards and peripherals for which drivers have been written.

USB technology is supposed to be a simple matter of plug and play for the consumer, and so it will be but not quite yet. The software is still in its infancy and the drivers have yet to be written but Castle Technology have decided to release the hardware for developers (£116) and those who want to be in place at the cutting edge of RISC OS technology. They were offering them with a 23% discount for those who wanted in on the ride. The idea is that major dealers in peripherals like digital cameras can offer their wares along with this board and associated software and it's not impossible to produce your own drivers.

So let's have a look at the hardware. It's a standard size podule that looks sparcely populated as you can see from the photograph. There are four USB sockets on the back panel each with their filtering components and a signal driver chip. In the centre the TransDimension UHC124 chip which is a four-port USB Host Controller. Moving towards the back is a 1Mb Flash memory and then on the back row is an assortment of buffers and a programmable logic array to mop up all the interfacing.

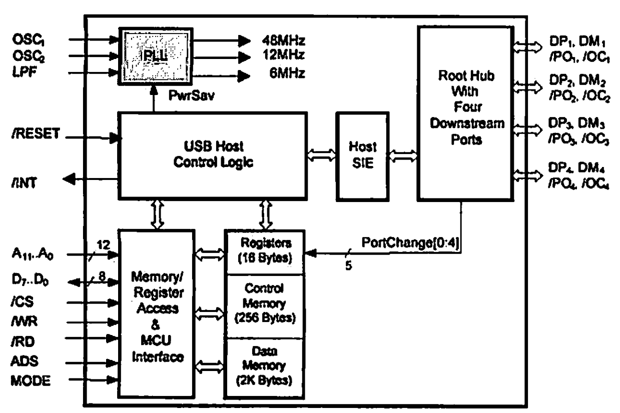


Figure 1 UHC124 block diagram

The Flash memory is a sort of programmable ROM that gives you non-volatile storage — it remembers when the power is gone. It can be reprogrammed about 10,000 times or more before it is worn out and so this is where the host software sits and be automatically loaded into the computer on power-up. At present this memory is mainly empty and the software has to be loaded up each session from disc.

Now what makes this interface possible is the UHC124 chip, in that it is especially designed for embedded systems. Normally, most host controllers are designed to work inside a PC or Mac. That means they also have a PCI interface in them, to allow easy access to the computer's bus.

TransDimension are a new company that have spotted a gap in the market for a simpler interface chip and Castle have seized on their offering. Figure I shows the inner workings of this chip in block form. The chip has some memory to minimise the load it places on your computer's processor. A full product description in PDF format is only a Google search away.

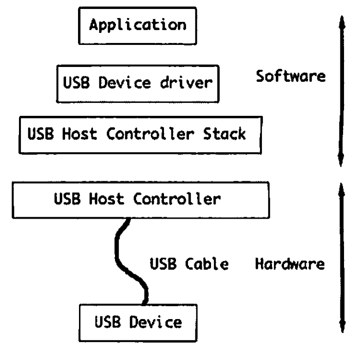


Figure 2 - USB Architecture

USB software is, as a whole, complex so it is broken down into a number of layers so you only have to concentrate on the interaction of these layers. This is shown in Figure II. At the top you have your application, the thing that wants to use the USB device. This communicates with the device drivers, the software that knows about the format and commands the device can take.

Next, this layer passes on the information to the host controller stack and this puts the data transfer requests into packets and directly controls the hardware interface chip. Data is then passed through the cable to the device itself.

Now there are classes of device in the USB world so that each individual peripheral does not have to have its own driver if it sticks to the recognised properties of its class. This would be wonderful if there were many classes defined but at the moment the only one that every one has full agreement on is the mouse class. So to the USB device driver all mice are equal and the same.

That's what is needed but what do we get? Castle have supplied the host controller layer along with a mouse and a keyboard device driver. There is also a generic device driver, written in C, so you can make your own. The host controller presents itself to the computer as a device in much the same way as the parallel port, the serial port and the filing system. Once installed you should be able to transfer data using the BGET and BPUT BASIC commands used to write to files.

However, the Device FS part of the operating system is not so well developed in versions of RISC OS less than 4.0 and this is causing a bit of a problem. The solution is to get that portion of code from the latest operating system and to put it into the flash memory.

So the state of play at the moment is that the USB interface will work with RISC OS 4.0 and above allowing you to connect a mouse and a keyboard. This should also work on lesser versions by the time you read this. However, it is quite a price to pay to have a cheap replacement mouse and keyboard. The true value will only be realised when the scanner, printer and webcam device drivers are written and we begin to see software appearing to support all those tasty peripherals. So while the bus is not quite here yet with the hardware in place its arrival is guaranteed.

Sponsored by Castle Technology
www.castle.uk.co

Mike Cook
rambles@acornuser.com

The Wakefield Show

This year's Wakefield show took place on the weekend of 18th and 19th May, in the now well-established venue of the Thornes Park Athletic Stadium.

Since it had been made clear by The ARM Club that there would be no RISC OS 2002 show, Wakefield was secure in its position as the most important RISC OS show of the year. So there was a lot of interest in whether the show would be as successful as previous years, or whether both attractions and visitor numbers would fall off substantially.

Arriving soon after opening time on Saturday morning, the show seemed pretty much as busy as last year. The area of the hall occupied had decreased somewhat compared with the 2001 show, which had itself been the first show where exhibitor stands didn't occupy the full area of the sports hall.

But the "shrinkage" this year wasn't hugely noticeable, and much of it seemed to be due to the circumstances of two or three individual exhibitors, rather than any widespread crisis in the RISC OS market. I may have misremembered from last year, but it actually seemed that a fair proportion of the reduction in total stand space was due to the charity stand being somewhat smaller this year!

As with this year's South West Show — which I covered in a previous issue of Acorn User — there did seem to be a quite rapid thinning out of the crowds in the latter part of both days of the show. Once again this seemed related to the relatively small number of new products being released at the show, but again there were some very noticeable exceptions.

As usual, it was no surprise that the Sunday was much quieter than the Saturday, as at most two day RISC OS shows. The recurring theme is that, if you attend a two day show for one day only and want to discuss things in detail with exhibitors when it's quiet, Sunday is the best day! If you plan to attend both days and want to get all the information you can, then it's best to attend relevant theatre presentations on the Saturday — although they will be more crowded, that will give you more time to peruse the much less crowded stands on the Sunday.

USB descends on RISC OS

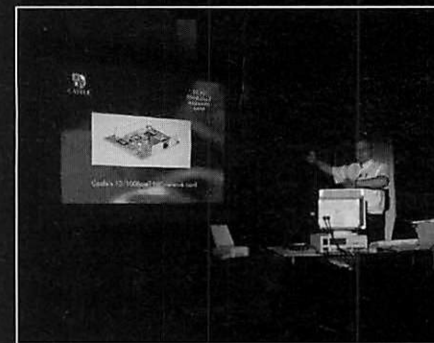
While there weren't so many new releases as one might normally expect at the Wakefield show, there were some areas where new releases were all the rage. Following on from their almost simultaneous launch of 100Mbit network cards for RISC OS, Castle and Simtec this time were both releasing RISC OS USB support.

USB is a technology that has been widespread in the PC market for a long time, however until now there has been no overwhelming need for it on RISC OS systems. Previously the only real advantage of USB support would have been to enable downloads from digital cameras which don't have serial ports, and even this requirement was eclipsed to a certain extent by Surftec's digital camera memory card readers. However, as USB has become more and more important in the PC world over time, its significance to the RISC OS market has increased as well. Increasingly, PC and peripheral manufacturers are using USB instead of more established interfaces such as parallel and serial ports.

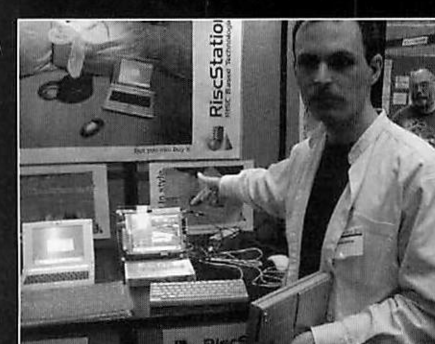
One particular advantage of USB support is to drive low cost printers which have USB interfaces but not parallel interfaces. But there are a great many other devices that can use USB, and Castle's Jack Lillingston had researched a long list of them for his theatre presentation at the show.

They include digital cameras and memory card readers, disk devices like Zip drives and even hard disks (albeit at a slower rate than most dedicated disk interfaces), cable modems, CD drives and CD jukeboxes, web phones, web cams, MP3 music players, Bluetooth wireless devices, digital speakers, and now even some toys that allow connection to computers.

While quite a few of these devices can be connected by other means, the advantage of USB is that it provides one simple connection standard that will support all of them. USB connectors are much smaller than traditional IDE, SCSI and parallel ones, the connections do not require termination or manually specified device ids like SCSI, and hot swapping of connections is possible.

















Using USB hubs — which are available very cheaply, sometimes built into the back of monitors for example — up to 126 devices can be connected, which should be more than enough for anyone. To add even more flexibility, there is support for up to 16 addresses for each device; thus a single device could be a CD stacker able to address 16 CDs individually.

Castle's USB podule has four ports which is a good start, Apple Macs only come with two as standard, and will work in Risc PC and A7000 series machines. It was available at the show, but this version was intended mainly for developers, to enable the required drivers for different devices to be written — the API is available on Castle's Web site.

Devices supported by the Castle podule so far include hubs, keyboards and mice — support for mice wasn't entirely complete at the time of the show though, with mice connected to the USB podule working for "about fifteen seconds" before halting.

Drivers for other devices should appear over time; there did seem to be interest in the USB podules from developers, and I saw at least one being taken away by a developer at the show. Castle plan a notional cost for their card of about a hundred pounds, but intend that most card purchases will be as part of a bundle from third party suppliers (for example, a USB podule bundled with a digital camera or printer, and so on).

In his presentation, Jack Lillingston emphasised that the aim was for these early release USB cards to provide a reliable and robust foundation on which to build future developments. One policy decision had been not to seize upon new developments in supporting chips for USB until the chips actually appeared on the market with definite supplies available, as new developments quite often promise one thing and deliver another. So Castle's podule — like Simtec's — currently supports USB 1.1 but not USB 2, an enhancement which is far less a priority than getting the many different drivers written.

Castle's implementation supports both 12Mbit/second and 1.5Mbit/second connections, the latter being for devices like keyboards and mice which do not need to transfer large amounts of data. The podule doesn't require a DMA podule slot, which will be good news for those of you already using, for example, a Viewfinder graphics card alongside a fast SCSI card or similar.

The USB developments from Simtec also seemed to be making progress, with drivers for a much wider range of devices already available, although I have heard of some developers having problems getting access to the hardware for development purposes. Some parts are still awaited from Taiwan for the main batch of production USB cards from Simtec.

I did see a basic command line demonstration at the Photodesk Ltd stand of USB download from a digital camera into a Risc PC using the Simtec card. Simtec have also helped to set up a Web site to support USB developments for RISC OS from all parties, at http://www.usb-riscos.com/

More on 100Mbit net cards

The release of competing products by Simtec and Castle in the fields of both USB and 100MBit networking doesn't seem to have caused any great acrimony, but I was able to tempt both sides into talking a little about the advantages of their 100Mbit solution over the competition.

Castle are offering 100Mbit cards for both podule slots and NIC slots, whereas the Simtec offering (a joint project also involving Stuart Tyrrell Developments, R-Comp and CTA Direct) is for NIC slots and RiscStation ISA slots only. Because of this, Castle are able to announce their card as the only 32-bit (rather than 16-bit) 100Mbit RISC OS network card.

On the other side of the coin, the Simtec offering uses a larger memory buffer on the card (12KB read and 4KB write, rather than 4KB read and 4KB write), which can give a noticeable performance advantage, particularly with larger packet sizes used by protocols such as NFS.

I was able to take a look at some early benchmark figures comparing the Castle and Simtec cards using RISC OS 4.02 which, while not independent, gave some initial ideas of the performance expected. According to these figures, the Castle card was rather faster for transfers in 10Mbit mode, while the performance for both cards was roughly similar for writing data in 100MBit mode; but the Castle card was vastly slower when reading data in 100Mbit mode.

Equally important is that the actual performance achieved is very much dependent on the IP stack in use by the operating system, rather than the network card itself. The Simtec card achieved around 25% better performance when using the latest official release of RISC OS Select (RISC OS 4.29) instead of RISC OS 4.02, managing over 1,500KB/sec for reading data, and tests on an even more advanced development version of RISC OS Select apparently gave even greater speed gains.

The good news here is that the performance of these new network cards looks set to increase steadily as the operating system is improved under RISC OS Select. In addition, both cards, like most previous RISC OS network cards, feature onboard flash ROM to hold their network software, so if there are any glitches that are affecting performance in the early versions of the software, they can easily be corrected.

Both varieties of card support both half duplex and full duplex operation, as well as the ability to auto-detect and auto-negotiate both duplex and speed settings with the device at the other end of the link; however these automatic features can be turned off if you prefer to set the speed and duplex settings explicitly.

A more obscure extra for the Simtec card is the possible release of an upgrade kit to support a second parallel port via their network card. This might seem a rather odd thing to fit to a network card, however for those using a wide variety of parallel devices, it could come in useful.

It's worth noting that you won't see the full benefit of the new network cards if you're still using an old 10Mbit hub, and for the best performance with several machines a 100Mbit switch is a worthwhile investment — R-Comp, Stuart Tyrrell, Castle and other companies were selling these for a few dozen pounds each at the show.

RiscStation laptop appears

One of the major items of interest at shows like these is always the question of what progress will be displayed on promised new RISC OS computers that have yet to appear. On this occasion RiscStation took most of the limelight, with the appearance of a fully working prototype of the RiscStation laptop.

At previous shows and demonstrations, only the Windows version of the laptop had been available for demonstration, which had been useful for showing the case, and how the system might look with RISC OS running on it, but less impressive from the point of view of demonstrating how much progress had been made towards actual release of the final product.

On this occasion however, a fully working system with motherboard and LCD screen was displayed, running RISC OS natively and with USB being used to control the mouse. The case and docking station were also on display separately, with one version running Windows, and one empty of its innards to show the very light weight of the case itself.

RiscStation hadn't booked a theatre presentation for this demonstration, and the demonstration, presented by Simtec on RiscStation's stand, wasn't available throughout the show, but instead was run at a specific time early in the afternoon on both Saturday and Sunday.

The presentation was announced on the tannoy, and drew a very large and very visible crowd around the stand, however there was some disgruntlement from people who had visited the RiscStation stand earlier in the day, found no working prototype, and left the show without being aware that the presentation would be taking place.

Further confusion was caused by the fact that RiscStation had been using Virtual Acorn, on the Windows version of the portable, to demonstrate what RISC OS would look like running on the machine. Thus when visitors who had been at the show commented on the newsgroups that a working RISC OS portable had actually been on display, they were angrily contradicted by those who had seen the Windows portables running Virtual Acorn but not the working RISC OS prototype, and assumed that other visitors had misunderstood what it was they were being shown.

Despite these problems with publicity — and the fact that the laptop is now considerably later than planned — the response from the show seemed to be very positive, with visitors delighted to see concrete signs that progress is being made and that the final delivery of the production machines does now appear to be just round the corner.









An interesting nugget of information from the presentation — and also mentioned by RISCOS Ltd — was that the laptop might even ship with RISC OS Select pre-installed, which would make it the first RISC OS computer to do so.

Simtec had also been busy with other RiscStation related developments, with the announcement of 2Mb flash ROMs for the third ROM socket on the RiscStation motherboard, along with the flash programming utility (!Snafu) needed to load modules into the ROM. I didn't manage to take a look at this at the show, but apparently the software can also be used with other Simtec products that contain flash ROM, such as their 100Mbit network interfaces, IDE interfaces and USB podule.

Omega news

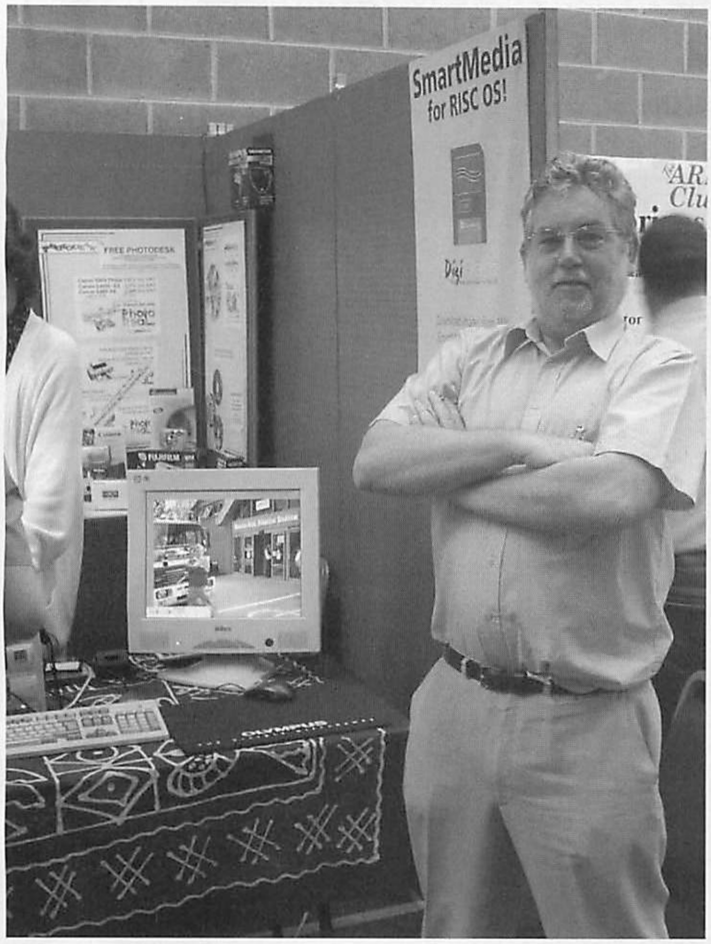
Other positive news had been released the day before the show, with David Holden of APDL revealing that he had spent several hours at MicroDigital's Yorkshire HQ trying out the prototype Omega, which he described as working "very reliably", and running applications such as Cerilica's Vantage without problems.

There has been much public speculation about the long delays in the appearance of the Omega, fuelled by MicroDigital's absence from the majority of RISC OS shows, in this case including the Wakefield show itself. So, although there wasn't an Omega prototype on the APDL stand — or anywhere else at the show — there was great interest from show visitors in finding out what David's impressions of the prototype were, and indeed how far from completion it appeared to be.

David agreed that the prototype Omega was indeed faster than the 287MHz Risc PC systems currently available, however he stressed that its speed was not the single most important thing about it. Both David and MicroDigital emphasise that the Omega, because of its extensive use of reprogrammable chips, is the first ever "soft" desktop computer, and thus represents a completely new approach to computer design, with updates and improvements to the system being possible without returning the computer to a dealer.

David also pointed out that current Risc PC systems effectively represent the end point of a design cycle that began the best part of a decade ago, and has seen gradual improvements since then to give us performance far in advance of the original Risc PC 600. He hopes that the release of the Omega — for which there was, perhaps wisely, still no specific date given — will mark the beginning of a similar ten year cycle of development and improvement.

Exhibitors who didn't have stands at this year's show included not only MicroDigital but also Surftec, Cumana and Zenta Multimedia. Robin Watts of Warm Silence Software was moving house so couldn't attend either, while at least one developer was absent due to getting married on the weekend of the show. Some exhibitors this year took stands for only one of the two days, with a different exhibitor replacing them the following day.



David Atkins of MicroDigital was at the show in person despite not having a stand, in order to meet up with some contacts — and indeed produced an extensive show report on the MicroDigital Web site. In a strange coincidence, the Deputy Mayor who opened the show was called David Atkinson.

Castle and Cerilica both had substantially smaller stands than last year, however both had new products on sale, and Cerilica were particularly pleased with the strong sales of Vantage on both days of the show. Stands selling the new 100Mbit network cards seemed to be doing brisk business, with R-Comp also selling the realtime strategy game Tek and the Grapevine IRC and MSN messaging software for the first time, while Stuart Tyrrell Developments were also selling optical mice, switches and converters, as well as PC systems bundled with Virtual Acorn.

Virtual Acorn also had its own separate stand for the first time, showing RISC OS educational software running on Windows laptops, plus various other attractions. Another new exhibitor were Brain Games, who released their card game Vingt Et Un, which also attracted a lot of interest apparently due to some of the photography included with the package.

RISCOS Ltd had a large stand with a variety of demonstration machines that included a StrongARM-based MP3 jukebox player. They seemed to be making quite a few sales of RISC OS 4 upgrades and RISC OS Select memberships, as well as RISC OS Foundation memberships, with discounts on the increased Foundation subscription cost for those people renewing at the show.

Since the first RISC OS Select CD, with RISC OS 4.29, a new version of !Printers, and many other goodies, had shipped to subscribers a little while before the show, there was little else new to report, however I was reassured that further development of RISC OS Select was well under way. Now that the long wait for that first CD is over, Select does seem to be going from strength to strength, with the subscribers' mailing list busier than most other RISC OS mailing lists that I read — busier than quite a few newsgroups in fact.

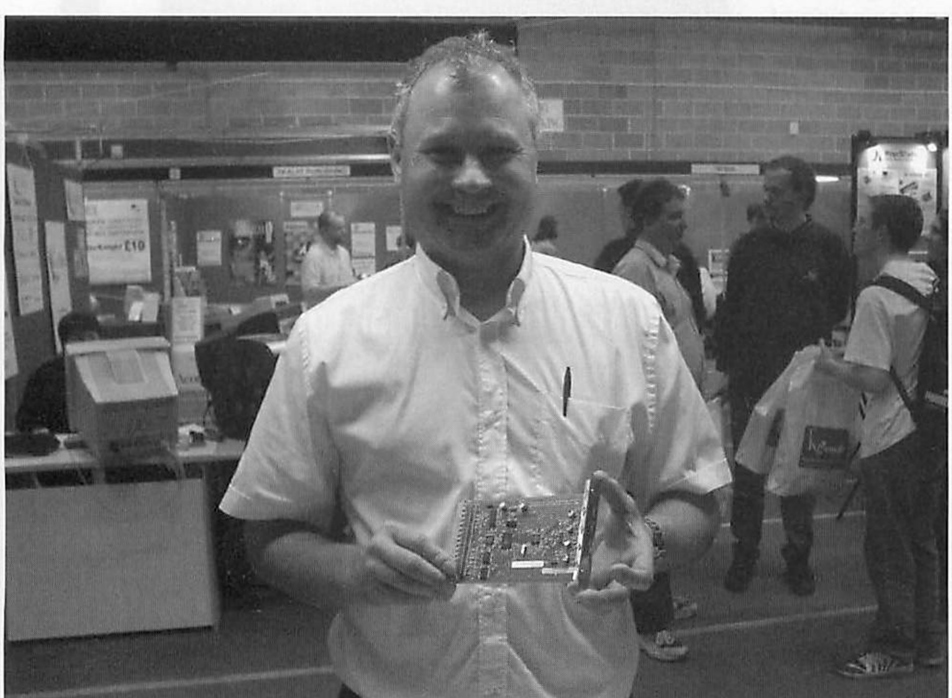
Other established exhibitors with new products included Paul Beverley's Archive Publications, advertising the new "Living with Technology" magazine — unfortunately not directly RISC OS related, but mostly not about computers either. Also not strictly computing was the latest offering from Fleur Designs, the rather complicated-looking Rithmomachia game that was released for the first time at the show, to join a now very extensive range of board games designed and produced with RISC OS.

The charity stand was doing a brisk trade as always, with quite a selection of RISC OS machines available at bargain prices, as well as the ever present selection of software, books, printers, redundant PC systems and other items. Even more of a bargain was to be found at the stand of the show organisers themselves, the recently renamed Wakefield RISC OS Computer Club (WROCC), who were giving away a free floppy disk including not only information about their club, but also an electronic copy of an issue of the club magazine.

Theatre presentations

Another thing that impressed me about the show was the very good attendance at the theatre presen-

Old and new...



tations. The theatre programme was totally booked out — to the extent that some exhibitors who applied late on were unable to obtain a slot — and all of the sessions seemed very popular.

I managed to attend Martin Wuerthner's presentation on Saturday, which had a very positive reception from the audience, underlining both the ongoing popularity of Artworks, and also Martin's commitment to develop it further. At the show he only had time to demonstrate a few of the most significant add-on modules he has produced for Artworks; as he pointed out, there are dozens of them, so demonstrating them all would have been impossible.

In addition to the add-on modules, Martin gave examples of some of the free bugfixes that he has made to the main ArtWorks code (including fixes for some of the problems that cause address exception errors, and the colour picker tick wrongly appearing as a Euro in RISC OS 4), and also some of the minor additions to the main code (for example the option to draw rectangles with inwards curving corners, as well as outward curving ones).

Questions covered issues as diverse as whether Martin will also develop Impression further (the answer being that he has too many Artworks improvements to implement for that, and is happy with Ovation Pro himself), and what additional graphics export options are likely to be available for Artworks. Martin said that TIFF export would be appearing shortly — in fact it had been asked for by a Dutch artist who needed it in order to abandon graphics work on other platforms and return to his preferred choice of Artworks on RISC OS.

Martin said that the AWRender module, which enables applications such as Ovation Pro to render Artworks files directly in documents, will be updated to support the new transparency features of the Crystal module. In addition, he has a very long list of other features he plans to add.

Asked about his work outside the RISC OS world, Martin said that he uses Linux, but doesn't use Windows if he can avoid it, and also commented that the majority of the money from his work comes from sales of RISC OS products. The ongoing development of Artworks certainly seems to be quite a success story, and although I do very little graphics work myself, it was certainly very encouraging to see such a lot of progress being made on what many once viewed as a "dead" product.

Overall the show did seem to have a great many of these more positive moments, and there is certainly a lot of enthusiasm emanating from some developers, even if new products are not quite so thick on the ground as they used to be. As always the show was very well organised by the Wakefield club, and this year there were no unscheduled interruptions!

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Additional photography by Danny Jones and Chris Ashton

Part 6: Tracking media

Last issue we took another look at the way we were controlling the opening and closing of the various zones using the control window. Both at the beginning and the end of that article I emphasised how programming was essentially a process of evolution and that, even while writing the article, I had seen a better way of doing things.

To re-cap, we have a control window and its associated procedures and data structures. Then we have a series of 'zones', a zone is a part of the program devoted to handling some particular, logical area. It might be the "media" or it might be a "recording" and so on.

The zones register themselves with the control section which controls what they do, to some extent. This is achieved by every zone having to have a particular set of procedures that the control section can call.

The reason we have the "registering" idea is that it means that we can construct the parts of the program to be almost completely autonomous: Adding and subtracting zones does not affect whether the application will run or not.

The main area of control is the display and closing of the main zone window. We also discussed the fact that a zone might have its own windows which would also need to be opened and closed when the control window buttons were clicked.

From here I had an idea based on a feature of Mac OS: Clicking on the iconbar icon would cause all the windows belonging to the application to disappear, and another click would make them reappear. This is a good idea and relatively easy to implement, since the control program already keeps track of which zone windows are open and which are closed.

But we have already noted that a zone might have its own zone-specific windows and these need to be opened and closed (a) when the zone itself is opened and closed; and (b) when all the windows are opened and closed.

My initial reaction to this was to have the control section call a procedure in the zone telling it to close or open its windows. The zone keeps track of which windows are open when the close instruction is issued, and then re-opens only those ones when the open instruction is received.

This is inherently inefficient: it means that every zone must have the same code to store window handles and open or close them when instructed. It would be far better for the control section to manage the zone's windows as well, then only one section of code would need to be written. We would need cooperation from the zone itself but that would be simpler to achieve.

So how would that be done? Simply like this: Whenever a zone wants to create, show, hide or dispose of its own windows, instead of using the 'card new / show / hide / dispose' command it calls a control procedure to do it:

```
def proc control_zwin_new(zn,zs,h)
def proc control_zwin_show(zn,h)
def proc control_zwin_hide(zn,h)
def proc
control_zwin_dispose(zn,h)
```

In this zn is the zone number, zs is the name of the window to create and h is the handle of the window created.

In the control section itself we build a data structure which can hold the handle of any created window and a flag which says whether it is on-screen (open) or not. To this we add two further routines, one which closes all a zone's windows (without changing the open flag) and another which opens all of a zone's windows if their open flag is currently TRUE.

These two routines can be used both when an individual zone is opened and closed using the control window, or when all the open zones are closed or re-opened using the iconbar icon. Simple.

There is one further procedure, is find routine, which locates the window being dealt with by its handle.

S-Base is quite capable of creating some pretty complex data structures — I have been quite adventurous on occasion — but this time we are not going to be adventurous at all.

The requirements are: For each zone registered we must create an array. Each

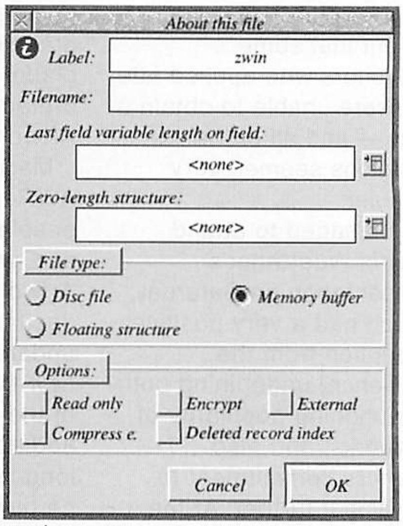


Figure 1 a

element of the array must be a structure containing two fields: a handle and an open flag. And this is what we create first. Go to the File resource and create a new "file" (it's

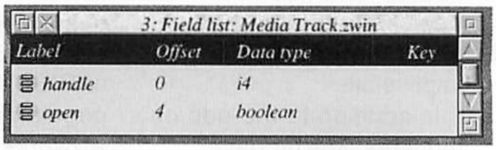


Figure 1 b

really a memory buffer type) called 'zwin', this is shown in Figure 1a. Then open it and create the two fields we need.

We don't know how many zones are going to get registered but we do know that we have a maximum number that can be allowed (CTRL_MAXZONES). Likewise we don't really know how many windows a zone is going to need but we can set a maximum which we can change if it turns out not to be enough. So in the Constant resource create a new constant called CTRL_MAXZWINS with a value of 10 (Figure 1c).

In passing you may notice in the screenshot another new constant called NO_HANDLE. I had been using a value of -2 to indicate a situation where a variable is meant to contain a handle but hadn't been given one yet. This is bad practice because I might want to change it some

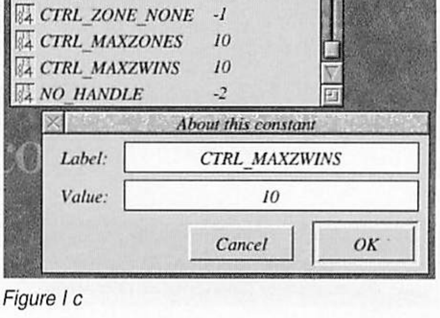


Figure 1 c

time. So I have created this constant and replaced all occurrences of -2 being used for this.

Finally, back in the control procedure, in its initialisation we create a new array. This time it is a two dimensional array and we find a major departure between S-Base and Basic. In Basic a two-dimensional array definition looks like this:

```
dim z zonal ctrl_zones[CTRL_MAXZONES]
dim z zwin  ctrl_zwins[CTRL_MAXZONES][CTRL_MAXZWINS]

for zn=0 to CTRL_MAXZONES-1
  ctrl_zones[zn].handle = NO_HANDLE
  ctrl_zones[zn].name   = "zone "+@str(zn)
  ctrl_zones[zn].label  = "Dummy "+@str(zn)
  ctrl_zones[zn].open   = FALSE
  for zw=0 to CTRL_MAXZWINS-1
    ctrl_zwins[zn][zw].handle = NO_HANDLE
    ctrl_zwins[zn][zw].open   = FALSE
    next
  next
```

Figure I d

```
DIM
ctrl_zwins(CTRL_MAXZONES,CT
RL_MAXZWINS)
```

The S-Base definition looks like this:

```
dim z zwin
ctrl_zwins[CTRL_MAXZONES][CT
RL_MAXZWINS]
```

If you recall from earlier in the series this creates an array, this time with two dimensions, where each element consists of the structure defined by 'zwin'. Figure Id shows the final code including the initialisation phase.

Figure II shows the zone window management code, we will run through them looking at their key points, starting with the 'proc control_zwin_find' procedure.

I have used a very simple method for placing window handles in the array: find the first empty space by simple search and use that. When we try to find handles (the same routine is used for both) we use the same linear search. We can afford to use this method because we do not envisage having lots of windows.

If you look at the code for 'proc control_zwin_find' it has two parameters, the first is the zone we are currently working with and the second is the handle we are looking for. The handle might be 'NO_HANDLE' in which case we are looking for a space to insert a new handle.

Two variables are used within the procedure: 'zw' is just for the loop and 'fnd' indicates if we have found what we are looking for, initially set to FALSE.

All we do is loop through checking each entry, if a match is found 'fnd' is set to TRUE and we break out of the loop. If the match is not found we fall out of the end of the loop 'fnd' is still FALSE so the loop variable is set to -2 (NO_HANDLE). Strictly speaking it is a bit naughty using that constant here because it is meant to be a non-existant handle not an invalid array index, however the meaning is clear.

In 'proc control_zwin_new' we have three parameters, the first two are the zone number and the name of the card to be created, the third is the returned handle of the window that is created.

There is a fourth returned value in this case, the procedure returns a string. If that string is zero length (null) there has been no error. But if it does actually contain information, a message, there has been an error and the message is the report of that.

This is a sensible way of doing things, it allows an error to occur in a routine but not force the program to halt at that point. The calling procedure can either deal with the error by (a) ignoring it; (b) reporting it and halting; (c) refering it to the user to make a decision; or (d) passing the error back to its calling procedure to deal with.

```
def proc control_zwin_new(zn,zs,return h)
  local s="",zw=proc control_zwin_find(zn,NO_HANDLE)
  if (zw)-1)
      card new h,zs
      ctrl_zwins[zn][zw].handle= h
      ctrl_zwins[zn][zw].open  = FALSE
    else
      s="'Control' cannot open any more windows for '"+ctrl_zones[zn].label+"'"
    endif
  return s
enddef

def proc control_zwin_show(zn,h)
  local zw=proc control_zwin_find(zn,h)
  ctrl_zwins[zn][zw].open=TRUE
  if (ctrl_zones[zn].open) then card show h
enddef

def proc control_zwin_hide(zn,h)
  local zw=proc control_zwin_find(zn,h)
  ctrl_zwins[zn][zw].open=FALSE
  card hide update h
enddef

def proc control_zwin_dispose(zn,h)
  local zw=proc control_zwin_find(zn,h)
  ctrl_zwins[zn][zw].handle=NO_HANDLE
  ctrl_zwins[zn][zw].open=FALSE
  card dispose h
enddef
```

Figure II a

Getting back to the 'new' procedure: First we check to see that there is an empty entry by searching for NO_HANDLE. If one is not found an error message is passed back to the caller. If a space is found, the new card is created and the array values are set with the handle and the flag that the window is not currently open.

In the 'show' routine we find the handle of the window to be shown, set the flag to show the window is open and then: IF the zone is currently an open zone, show the card, but don't show the card if the zone is not currently open.

This is done because there might be a situation where a zone receives a message from another zone that causes it to open a window. However if the zone is not currently being displayed we wouldn't want a rogue window to pop-up.

Thought for the future: Under these circumstances it would be useful to have some sort of alert mechanism in the control section which would, perhaps, flash an alert symbol in the control window next to the zone's name telling the user that something has happened in that zone which may need attention. We won't bother with that now but a simple call from this routine to the necessary code would do the trick, something like 'proc zone_alert(zn)'.

The 'hide' procedure is much simpler, to hide the window we don't need to check whether the zone is currently open, we just hide it anyway. We use a special version of the 'card hide' command which adds the 'update' modifier. This makes S-Base remember where the card is so the next time it is created it appears in the place it disappeared.

```
def proc control_zwin_find(zn,h)
  local zw,fnd=FALSE
  for zw=0 to CTRL_MAXZWINS-1
    if (ctrl_zwins[zn][zw].handle=h)
        fnd=TRUE
        break
      endif
    next
  if (!fnd) then zw=NO_HANDLE
  return zw
enddef

def proc control_zwin_hide_all(zn)
  local zw,h
  for zw=0 to CTRL_MAXZWINS-1
    h=ctrl_zwins[zn][zw].handle
    if (h<>NO_HANDLE) then card hide update h
    next
enddef

def proc control_zwin_show_all(zn)
  local zw,h
  for zw=0 to CTRL_MAXZWINS-1
    h=ctrl_zwins[zn][zw].handle
    if (ctrl_zwins[zn][zw].open) then card show h
    next
enddef
```

Figure II b

In 'dispose' we find the appropriate entry, get the window handle, set the array element to its null values (making the element available for a new card in future) and dispose of the card.

The 'hide_all' routine closes all the windows in a zone but does not change the 'open' flag. So when the 'show_all' routine is called it runs through all the windows and re-opens only those windows that were previously open.

I have tested this by creating another window in the dummy zone so I know it works. I won't bore you with the test details.

One other error has cropped up which has to do with the buttons in the control window, this part was not working properly and I did have to play with the options in the icon element window until I found the right settings for each icon. You will have to change all yours (Figure III) unless you are just downloading my version from **www.acornuser.com/downloads**

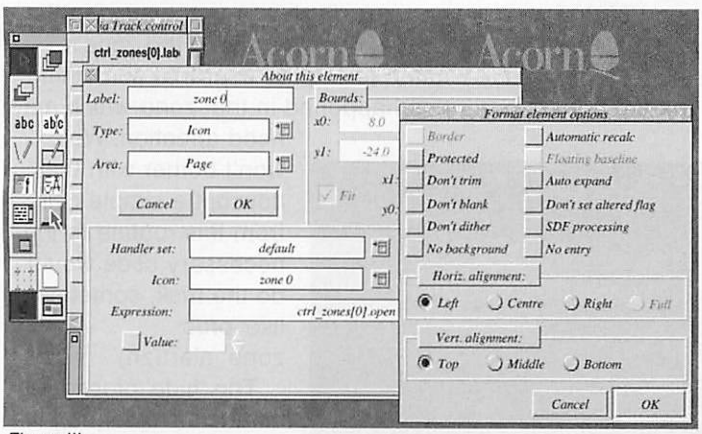


Figure III

Back to the media

The time has come to start work on the actual application again. This will go slowly at first as we build the various elements needed in a standard zone, but subsequent zones will go faster.

The first type of object we are going to look at creating and editing a 'mediatype' which you may recall from part three (March 2002) of this series.

The first step is to stop the dummy zone from registering itself by commenting out the first registration line at the top. Close the window and in the list of procedures select dummy and make a copy called 'mediatype'. The copy is created and it is opened. Place the cursor at the start of the file and delete the comment marker from the start of the first line. Now press F4 and do a search and replace converting all 'dummy' to 'mediatype'.

Move to the line in 'proc mediatype_startup' and change "Dummies" to "Media types". Press F3 and Return to save.

Go to the Templates and copy 'dummy zone' as 'mediatype zone', we want this to be the same for now so just click OK. Close Templates and go to Formats, copy 'dummy zone' as 'mediatype zone' again. This time change the template to 'mediatype zone' and click OK.

Press Control+F3 to save the whole thing back to disc, just in case you haven't been doing this.

If you run the application it will now pop-up with the control window showing "Media types" instead of "Dummies" and that appears in the title bar of the zone window as well.

We are going to make an assumption: Most zones which can be used to create, edit and delete types of records will have the same overall design and structure. They will have the three buttons at the bottom and, something we haven't inserted yet, a list of current records in the middle.

The first thing we'll do, just to make things interesting, is build the button handling routines and our first object creation window.

```
curzone = proc control_find_zone(@handle)
if (curzone=CTRL_ZONE_NONE) then return

local zname = @trim(ctrl_zones[curzone].name)
ok=FALSE
zrnew=-1

case @clickelementlabel
  when "new"
    @exec("proc "+zname+"_new(@handle,zr,ok)")

  when "edit"
    @exec("proc "+zname+"_edit(@handle,ok)")

  when "delete"
    @exec("proc "+zname+"_delete(@handle)")

  otherwise
    @exec("proc "+znn+"_click(@handle,@clickelementlabel)")

endcase
```

Figure IV

Go to the handler sets and create a new one called "zone", add an S Click handler called "zone click" and then click "New". Figure IV shows the basic code we use, this is from experience so a lot of development is bypassed.

The first two lines check to see what zone has been clicked in using the handle of the card just *clicked*, we could have more than one on screen so we need to know which. We exit if it's no known zone.

Then we get the name of the zone, this is used to call procedures within the zone, we also set a couple of global variables, we use 'ok' to check outside the handler after it is finished and 'zrnew' will hold the record number of a newly created record.

The case..endcase structure checks for the standard buttons and calls the appropriate routine in the zone code while the 'otherwise' part calls a standard click handling routine for any other element in the main zone window that the standard routine doesn't know about.

From here go to the Format list and Control+double-click on the 'mediatype zone' entry, select the handler set menu and choose the 'zone' entry to attach that handler set to this window.

Run the application, open the mediatypes zone window then click on "New", you should get an error message saying that procedure 'mediatype_new' does not exist — which is correct because we haven't written it yet.

Summing up

The next stage is going to get a bit nasty so we will leave it there. We have covered a fair bit of ground this time including a round-up of how we got to this point.

We also looked at finally making the zones open and close properly and began the creation of an actual part of the application, though even this also forms part of the skeleton structure.

Next time we will go into the actual creation, editing and deletion of records, and work on the user interface for this.

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Part 3: Dr Wimp in practice

Firstly, an apology. The first article in this series referred to two separate panels containing brief introductions to 'handles' and 'window templates'. Unfortunately these panels were not printed with the article. They should now be on the Acorn User Web site at www.acornuser.com in OvationPro format - and they are also on Ray Favre's Web site (see end of article). For anyone without Internet access, Ray will exceptionally provide printed copies of these panels if you send him an SAE.

As promised, this article is going to start with !MyApp3 as we left it last time and develop it further. As before, to avoid confusion, we will copy and rename !MyApp3 to become !MyApp4 and actually start with that. Also as before, the Acorn User Web site has a copy of !MyApp4, all ready to go, in the folder StartApp.

More icon manipulation

Firstly, take a copy of !MyApp4 and, to remind ourselves where we are starting from, run it and clicking Select over the iconbar icon to get the window shown in Figure I.

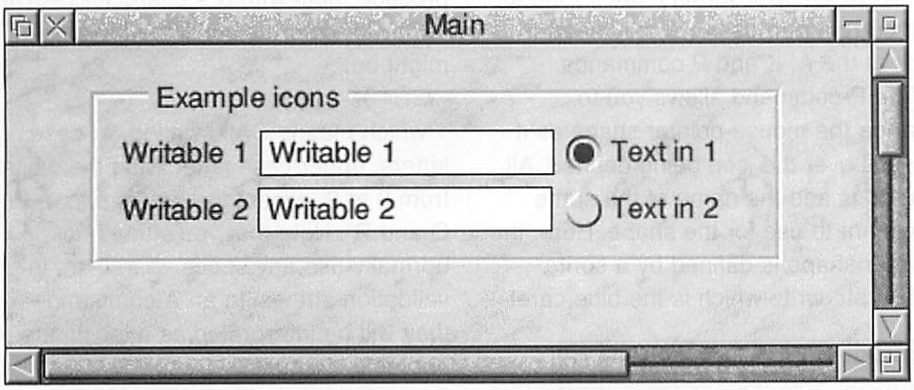


Figure I: The initial main window in the running !MyApp4

Now let's explore the two radio icons very briefly. As you can see, the top one is initially selected and the lower one is not. That was how we set them up last time. We also gave them both the same ESG (exclusive selection group) number (1) in their template definitions. To confirm what this means, click Select or Adjust over the lower radio icon. You'll see that this selects it and de-selects the top one.

Clicking Select or Adjust over the top icon again restores things to how they were. Thus, however many icons you have with the same ESG number, only one of them can be selected at the same time. If you want more than one group of icons to act in a similar way, just choose a different ESG number for each of the other groups but use only one number within each group. ESG numbers can be in the range 1-31.

But note one other point: press Adjust over an already-selected radio icon and you'll see that it de-selects that icon but does not cause the other radio icon to become selected. We end up with neither radio icon selected despite them having the same ESG - which is not a good thing. We can easily resolve this with our coding and will pick it up again below.

To start taking things further, let's get rid of that introductory text currently in the writable icons. Change Lines 340 and 350 of the initial !RunImage listing to:

```
340 PROCwimp_puticontext(main%,3,"")
350 PROCwimp_puticontext(main%,6,"")
```

Those double quote characters need to be plain, boring ASCII character 34 as supplied by your ordinary text/Basic editor. Copying lines from a clever word processor using 'fancy quotes' can cause a problem.

Now, bearing in mind that the top radio icon is initially selected, let's ensure its associated writable icon is enabled (available for use) and the lower writable icon is disabled (greyed out, not usable).

So, add the following lines just before the ENDPROC line in DEF PROCuser-initialise:

```
PROCwimp_iconenable(main%,3,1)
PROCwimp_iconenable(main%,6,0)
```

This wimp-function is new to you, but its format is the same as PROCwimp_iconselect() which we have already used.

The first two parameters define the window and icon involved and the third parameter sets the required state (as described by the wimp-function name). Here, the third parameter is set to 1 if we want the icon to be 'enabled' or 0 if we want it to be 'disabled'. It's as easy as that.

Now save !MyApp4, run it again and click Select over the iconbar icon to see the change in the main window. The disabled state of the lower writable icon may, in fact, be a little difficult to make out visually but it is easily confirmed if you try to click in it. It will not attract the caret and, indeed, you will notice that the pointer shape does not change when over the icon - as it will over the enabled top icon.

Now, we want to set things up so that the correct enabling/disabling takes place whenever we click Select or Adjust over either of the two radio icons any time after the above initial set-up. We do this by using, again, DEF PROCuser_mouseclick().

The sort of routine we want is:

```
CASE window% OF
  WHEN main%
  CASE icon% OF
    WHEN 4
    PROCwimp_iconenable(window%,3,1)
    PROCwimp_iconenable(window%,6,0)
    IF button%=1 THEN
PROCwimp_iconselect(window%,icon%,1)

    WHEN 7
    PROCwimp_iconenable(window%,6,1)
    PROCwimp_iconenable(window%,3,0)
    IF button%=1 THEN
PROCwimp_iconselect(window%,icon%,1)
  ENDCASE
ENDCASE
```

As you can follow, if we click Select over the top radio icon (icon 4) we will enable the top writable icon (icon 3) and disable the lower writable icon (icon 6). The reverse happens if we click Select over the lower radio icon (icon 7). However, if we click Adjust instead (button%=1) we also re-select

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whichever radio icon clicked.

As our !RunImage listing already has a small CASE window% OF construct in it we need not include the first and last lines of the above routine when we add it to DEF PROCuser_mouseclick(). So add that extract now, save it (after re-numbering, if you use line numbers) and re-run !MyApp4 to check that the desired results are achieved.

Handling keyboard text

The next step is to enter some text into the writable icons.

As things stand at the moment, you can do this quite freely once you have clicked Select over whichever of the writable icons is enabled to gain the caret. Try it. You'll find that there is a limit of 32 characters, because we set that limit in the writable icon definitions in the window template. You'll recall that we actually set a limit of 33, which is 32 actual characters plus an automatically added - but invisible - terminator character.

But we want to be a bit more clever than this. Firstly, let's limit the allowable characters to, say, the lower case letters a-z. This is done entirely within the icon definition in the window template - via something called the 'validation string'. Once again, this subject is nothing exclusive to Dr Wimp. It's just another of those things you need to get into for Wimp programming by any means.

So, load the template file called Templates into your template editor (for example, TemplEd in the Dr Wimp package), double-click on the Main window and then double-click over the top writable icon - icon number 3. You'll get the window of which Figure II is the top part.

You'll immediately see the writable icon labelled Validation. It currently contains the mysterious string:

```
Ktar;Pptr_write
```

This is a 'validation string' - and there is really nothing very mysterious about it. The string is merely a set of special text commands which determine some of the icons characteristics. Each command is of the form:

```
Xyyyyyy
```

where X can be any one of the letters ADFKLPRS and yyyyyy means other code letters or text (of varying length) and depending on the value that X takes. If you want to use more than one command they are separated by a semi-colon. A validation string is not case-sensitive but it is clearer if we keep X-values in upper-case and the y-values in lower-case.

So our writable icon number 3 already has a validation string containing two commands: Ktar and Pptr_write - and we read these as a 'K-command' and a 'P-command'.

You will need to look in the RISC OS Programmer's Reference Manuals (PRMs) for the full details of all the available validation string commands (or in my 'Dr Wimp's Surgery' book!) but for our current purposes we only need to look at the A, K and P commands.

The P-command allows you to change the mouse-pointer shape as it passes over the icon being defined. All you do is add the name of the sprite you want to use for the shape. Here, the pointer shape is defined by a sprite called ptr_write which is the blue caret-looking shape with which you will be familiar. Check it by running !MyApp4 and noting what happens as you move the pointer in and out of the enabled writable icon.

It is vital that any sprite-name you use is already known to the computer but, fortunately, RISC OS supplies and automatically loads several different sprites for pointers (all named ptr_xxxxxx) and ptr_write is one of them, so it is straightforward. For pointers, the sprite also needs to be of a certain specification, so you cannot use just any sprite.

So, simply by including the P-command Pptr_write in the icon's validation string, the pointer changes when it is over the icon.

The A-command is extremely useful. It determines which characters are (A)llowed to be typed into the icon from the keyboard. (Without an A-command, the default situation is that all printable characters are allowed.)

As indicated above, we want only the lower-case letters from a to z to be allowed; and the A-command to do this is simply:

```
Aa-z
```

If you want to exclude characters, you precede them with a ~ character (ASCII 126). So a more complicated example might be:

```
Aa-z0-9A-Z~pqrPQR
```

which means ÒAllow all lower-case letters, upper-case letters and the digits from 0 to 9, except the letters p, q, r, P, Q and R". Note that you should not normally use any space characters in validation strings. In an A-command they will be interpreted as a legitimate printable character.

The K-command has been left until last because it is a little more involved - and we do not actually need it in our application. It determines how the caret moves between different writable icons in the same window and also whether or not the application will get a specific notification when keyboard keys are pressed.

We do not need to go into the detail here and we only need to note that, a little later, we will wish to take action when the Return key is pressed - and RISC OS always notifies the application when that occurs. Thus, we can delete

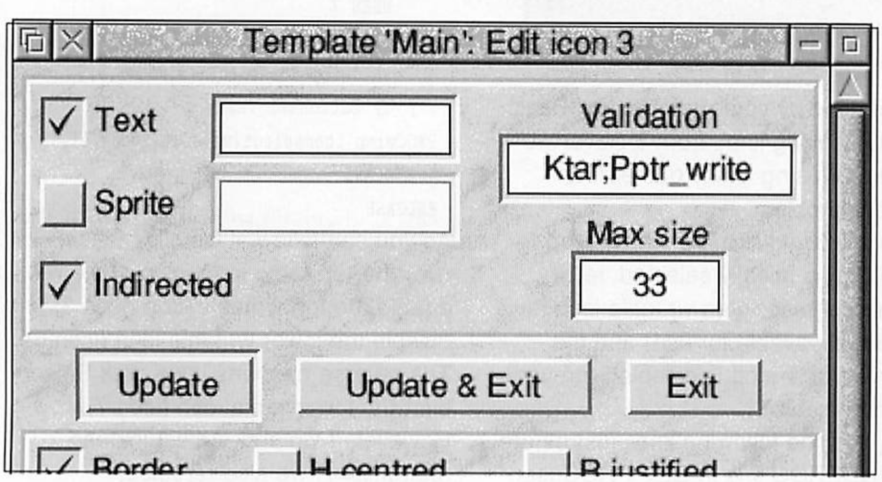


Figure II: The top part of !TemplEd's 'Edit icon'window showing the 'validation string'

the K-command here and rely on this default situation.

So, we end up with needing a validation string of:

```
Aa-z;Pptr_write
```

and we need the same string in both writable icons (icons number 3 and 6). So edit the box accordingly in the above Edit icon window of TemplEd and click the Update button. Then do the same for icon 6 and save the changed Templates file.

Now re-run !MyApp4 and check that the only characters to appear when you use the keyboard are the lower-case letters. So far, so good!

Now let's move on and take some action when the Return key is pressed. For this we need to look at:

```
DEF FNuser_keypress(window%,icon%,key%)
=0
```

By now, it will be no surprise to learn that the parameters give the window% and icon% handles where the keypress took place and key% is a number representing the keyboard key pressed. In fact, because we deliberately decided to use no K-command in the validation strings of the writable icons, the only keypress to activate this user-function will be the Return key - whose value in this context is 13 (&D).

But this is also the first time we have met a DEF FNuser_xxxxx as opposed to a DEF PROCuser_xxxxx and hence we now have the return value from the DEF FN to consider. Here, in its 'empty' state, you can see that the return value is 0.

Dr Wimp uses the return values from any DEF FNuser_xxxx to decide what specific magic to perform behind-the-scenes. In the case of DEF FNuser_keypress(), if the return is 0 it is the same as you telling the Wimp Manager that you are not taking any particular action as a result of the call. The Wimp Manager will then tell other running applications of that key press in case they want/need to take action on it.

However, if you change the return value to 1 then it is the same as telling the Wimp Manager "O.K. This keypress is for me. I'll deal with it, thanks." and the Wimp Manager (possibly with a sigh of relief) will know that it needs do nothing more at that moment.

All the DEF FNuser_xxxxx work in a similar way. The return of the 'empty' value (which is not always 0) usually means "not interested" and the return of something else usually means ÒI've taken some specific action on this". Section 3 of the Dr Wimp Manual gives full details for each case and you can appreciate that it is vital you ensure that the correct return value is given for the particular circumstances which may arise during the application run.

With this explanation, let's add code which, when we press the Return key, simply copies the text typed in one writable icon to the other.

So, make DEF FNuser_keypress()look like this:

```
DEF FNuser_keypress(window%,icon%,key%)
LOCAL return%,text$
return%=0
CASE window% OF
  WHEN main%
  CASE icon% OF
    WHEN 3
    CASE key% OF
      WHEN 13

text$=FNwimp_geticontext(window%,icon%)

PROCwimp_puticontext(window%,6,text$)
      return%=1
    ENDCASE

    WHEN 6
    CASE key% OF
      WHEN 13

text$=FNwimp_geticontext(window%,icon%)

PROCwimp_puticontext(window%,3,text$)
      return%=1
    ENDCASE
  ENDCASE
ENDCASE
=return%
```

Renumber and save the !RunImage and run the altered !MyApp4 again to try it out.

You should be able to follow this coding without a problem and it is not the only way the same result could be achieved. Even the two new wimp-functions FNwimp_geticontext() and PROCwimp_puticontext() should be easy to understand. They 'do what it says on the tin'.

Note in particular how the LOCAL variable return% is used to ensure that the DEF FN returns 1 when Return (key% value 13) is pressed over either one of the writable icons (icons 3 and 6) and only in those circumstances. Also note that a disabled icon can still have text written to it, though not from the keyboard.

You may feel that the coding is a little heavily structured for such a small task but please remember that most applications will have more than one window, several writable icons and perhaps many different key presses to take action on. The above sort of structure would then become very easy to expand - and to understand when you read it again some months later. So it is good practice to do it from the start.

Finally for this time, you might want to alter the DEF PROCuser_mouseclick() coding to delete any existing text in a writable icon when you enable it. It probably is a bit neater. I'll leave that for easy 'homework' but it is incorporated into the version of !MyApp4 in the EndApp folder in the download from the Acorn User Web site.

Don't forget that we'll start from that version of !MyApp4 next time and we'll have a closer look at menus.

Contacts

Download the Dr Wimp package from my Web site at:

www.argonet.co.uk/users/rayfavre/

and this site also contains details of my books 'Starting Basic' and ÒDr Wimp's Surgery" which are sold entirely for charity.

E-mail: **rayfavre@argonet.co.uk**

Printed versions of the separate panels missing from the first article of this series are also available on receipt of an SAE at the address below.

If you do not have Internet access a copy of the latest Dr Wimp package can be obtained by sending a formatted (1.6M) floppy disc and return postage stamps to:

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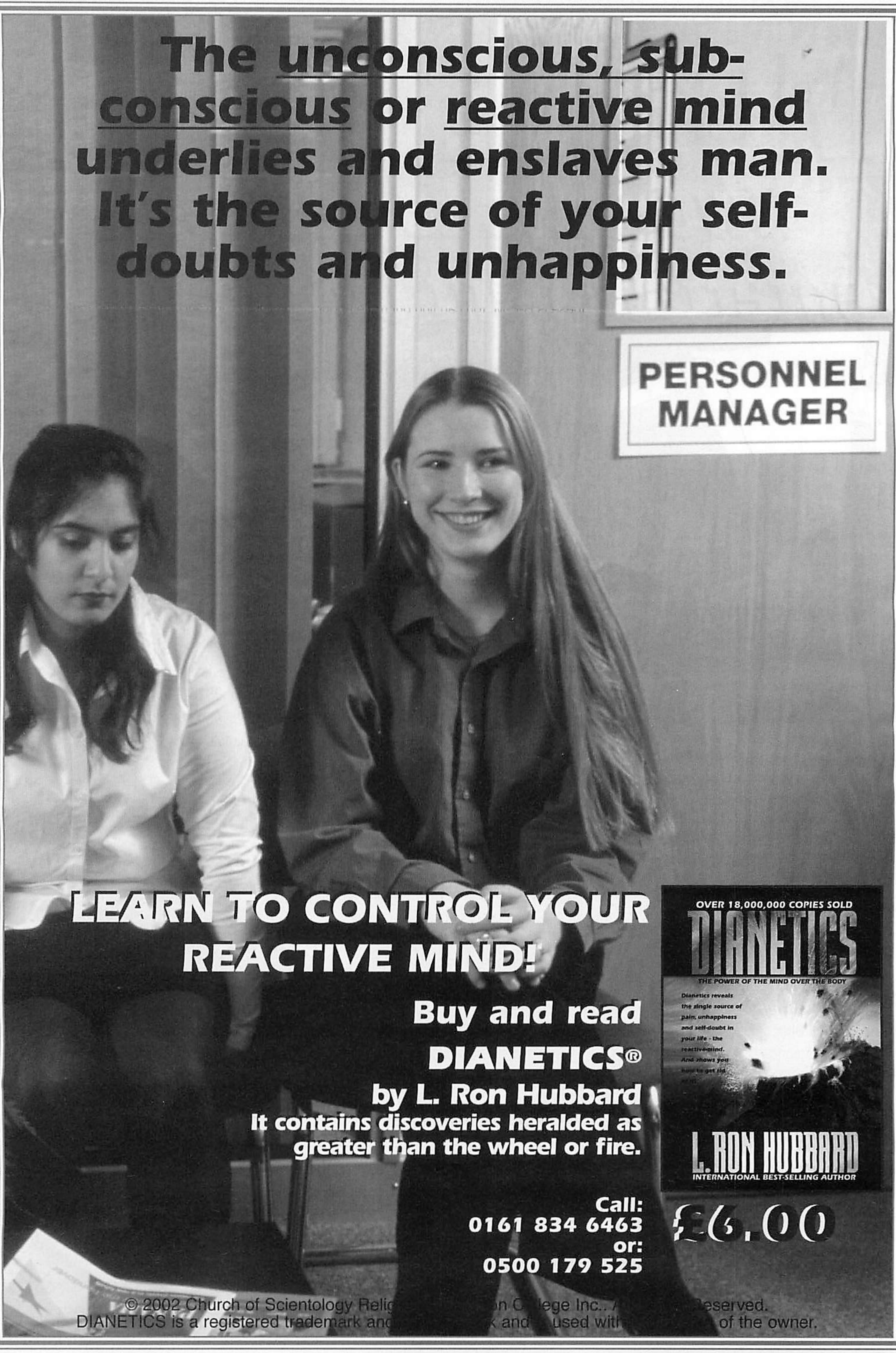
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The latest education news

Interactive whiteboards

Schools and Colleges throughout the United Kingdom are in for an educational boost this spring and summer, with the launch of a nationwide initiative, designed to substantially reduce the cost of acquiring interactive whiteboards.

Through corporate sponsorship, interactive whiteboards are being made available to all educational establishments at heavily reduced prices. The Interactive Whiteboard for Education Initiative is the brainchild of Go Education plc, a company that specialises in educational and learning resources. Through the Initiative, Go Education is able to give many schools an unprecedented opportunity to acquire a highly effective teaching tool at a very affordable cost.

Interactive whiteboard technology is now regarded as an essential learning tool for the digital classroom a fact recognised by the Government. Trials have already shown that this technology greatly enhances pupils' learning and performance, and with the initiative, classroom teaching is poised to enter a whole new level.

Ms Swanton, ICT Coordinator at St "Mary's RC Primary School, recalls Right from the start the children were enthusiastic, which encouraged them to produce work of a high standard. I am intending to purchase more boards next term and highly recommend them to any school. In time, this technology will replace all the conventional blackboards and whiteboards."

The technology has been heralded as significant for schools and pupils alike, and has been welcomed by several key figures in education. Peter Frost, Chief Executive of the National Primary Trust, summarises: "Clearly, the whiteboard technology when used as a tool for learning has exciting possibilities, and it is encouraging that this has been recognised by Government."

Due to popular demand, the initiative offer has been extended to run until 30th September 2002. For a free information pack, call Go Education on 020 8795 3882 or visit their comprehensive Web site at www.goeducation.co.uk

CAP it all

A new government initiative is now up and running to help pupils who have difficulty in understanding language, communicating verbally and using written communication. The Communication Aids Project (CAP) is funded by the DFES and managed by Becta. £10 million will be spent to assess pupils' needs and fund hardware, software and peripherals as well as training teaching staff.

CAP is seeking to help all pupils who have a communication difficulty by providing technology to enable them to access the curriculum and to interact with others. Communication difficulties range from primary problems, such as hearing impairment, to more complex ones such as severe cerebral palsy, while some communication difficulties are temporary. CAP aims to meets the needs of the individual child. To help schools a series of registered CAP suppliers have been created and latest of these is R-E-M. You can find out more about what they can offer at www.r-e-m.co.uk

PE and ICT mix it up

Extending its innovative Your Espresso range into secondary schools, BETT award winner Espresso Education (+44/0 20 8237 1200) has launched a Physical Education GCSE resource on CD-ROM. Developed in association with Hartlepool City Learning Centre, the resource is the first ever standalone module available from Espresso.

This new addition is divided into four sections of the PE syllabus: Human Body, Healthy Living, Training, and Sport and Society. This incorporates lesson resources that are based around current and topical television programmes and new reports supported by relevant websites, interactive tasks, differentiated test papers and issues to stimulate debate.

The module is fully indexed to the National Curriculum and has a staffroom that guides teachers through its resources and how each one fulfils the requirements in the GCSE PE syllabus. Like the resources on Espresso's subscription-based Secondary Service, it also has a homework site which provides printable test papers and Web site links.

Many of the Web sites on GCSE PE are incomplete or out of date, commented Jonathan Crone, Head of PE at Dyke House School in Hartlepool, "This CD-ROM is specific to the syllabus and to the interests of our pupils and will stimulate learning; it is the most motivating resource I have come across for GCSE PE. It covers topic areas very well and even gives extension work to our most able pupils. It should make planning lessons much easier."

Bards unite

Shakespeare Primary School in Leeds has been at the head of a scheme called Altogether Now. This is the largest project of its kind ever undertaken by a BBC local radio station who aim to use broadcasting skills, social action initiatives and arts projects to really make a difference to the local community.

Two members of the BBC Radio Leeds team, Trevor Gibbons and David Miller, have been based at the school working with Year 6 to make radio programmes and gain an insight into broadcasting. Also involved was Keith Wass, the Training and Resource Manager from Softease who has been helping the pupils learn how to build and maintain their school's Web site using Textease.

Meanwhile, Year 5 pupils have formed a group that will be responsible for the design and maintenance of the web site named The Website Club. All of the work on the web site will be done entirely by the pupils with only minimal input from teachers.

Talking about the scheme, Becky Moyce, ICT Coordinator at Shakespeare Primary School said, "We have seen a dramatic increase in both the pupils' and teachers' learning curves since Textease has been implemented. Both the staff and children's enthusiasm for ICT have shot up since the start of the Softease training sessions from Keith."

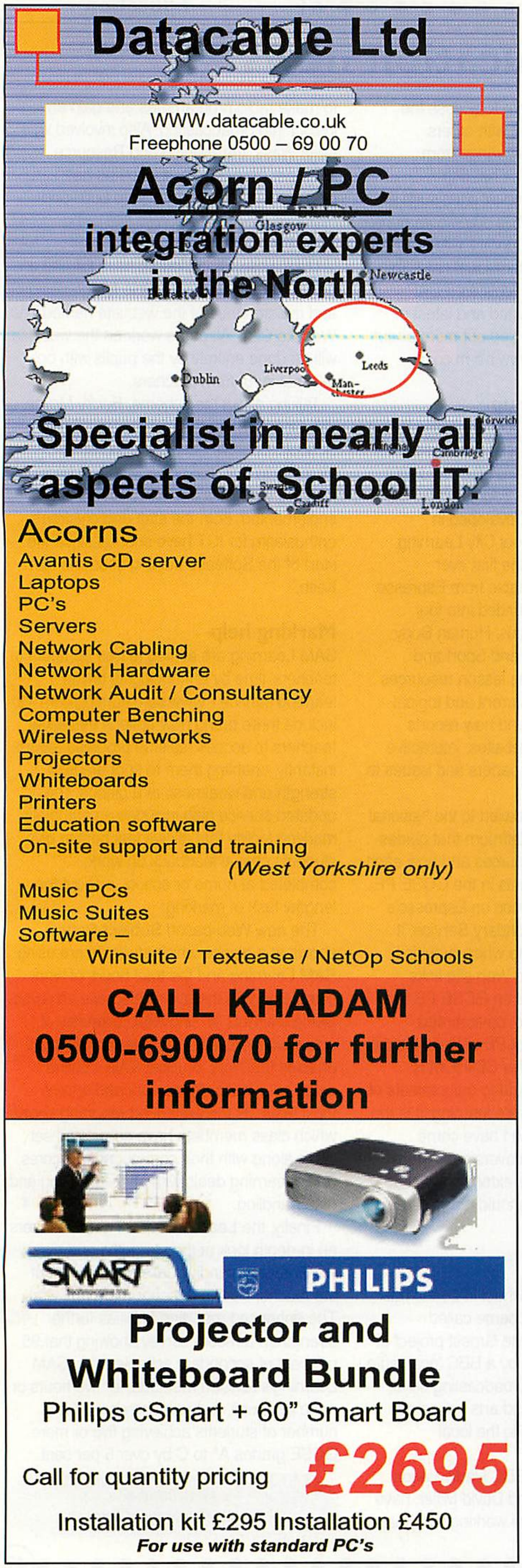
Marking help

SAM Learning are aiming to free up hours of teachers' time by enhancing its online learning service - www.samlearning.com - to include three brand new options that allow teachers to access realtime progress reports instantly, enabling them to spot areas of strength and weakness at a glance. The updated service also includes an automatic marking facility that allows teachers to give students crucial feedback on work, completed at home or school, without the lengthy task of marking.

The new Web-based **Subject Report** shows at a glance which students are using SAM Learning and the total hours of work completed with the average scores achieved, giving teachers an unrivalled overview of achievement levels. The **Question Report** enables teachers to utilise SAM's online exam courses for homework and end-of-topic tests, as the enhanced reporting shows which class members have completed set tasks along with their corresponding scores. SAM Learning deals with all the marking and data handling.

Finally, the **Learner Report** gives teachers an in-depth look at the strengths and weaknesses of individual students without the teacher having to set or mark any work. The enhanced reporting facilities further strengthen a recent survey showing that 95 per cent of secondary schools using SAM Learning's revision methods, for five hours or more per pupil, last year increased the number of students achieving five or more GCSE grades A* to C by over 6 per cent.

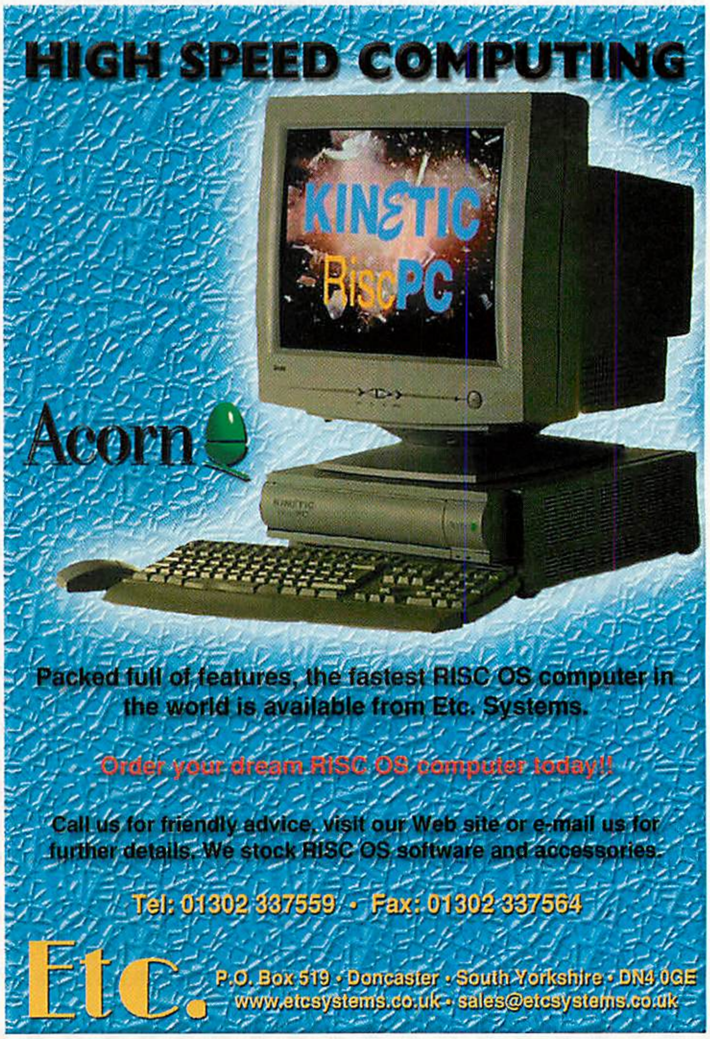
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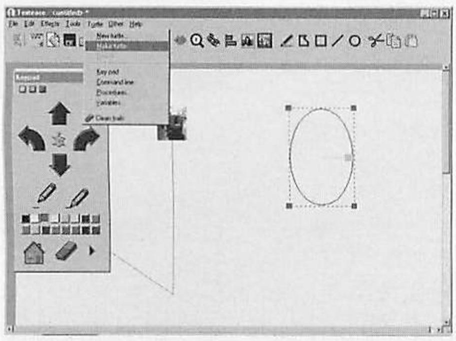
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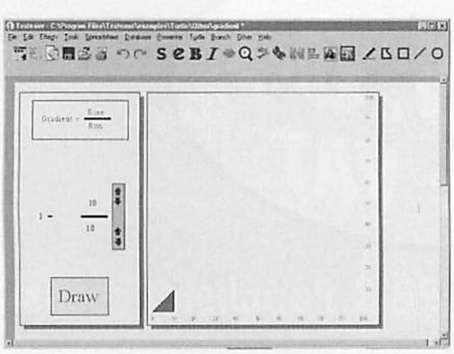
Turtle turnaround

Since Logo was first created people have expounded on its virtues and capabilities. However in Primary schools in particular you are only likely to see Roamers, floor turtles and programs which simulate the physical action on a computer screen. Sherston started to change teachers' perceptions with their Crystal *Rainforests* but Logo has long been confined to turtle graphics.



I've heard various arguments why this is the case over the years but in the end it comes down to the fact that most teachers have not got an all-encompassing interest in computer programming and even if they have time restricts how many hours they can take learning the intricacies.

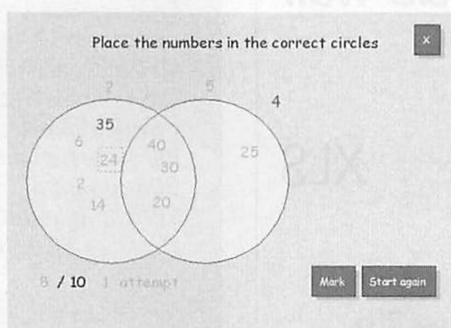
Companies have realised this and produced some excellent programs over the years to take these restraints into account. However, in 2002 the words programming and control are still guaranteed to send teachers running for their ICT Coordinator where they seem much happier with spreadsheet algorithms.



Enter Textease with a new string to its ever-growing bow. With its familiar screen and icons newcomers are less likely to be put off, but this is no dumbing down of a powerful programming tool. I'm always a little cautious of the word 'flexible' but Textease promises flexibility from simple movement of a single object before progressing to complex programming and control over multiple objects. The key however, is whether the program provides a gentle enough learning curve allowing children (and teachers) to progress through these levels of application building on confidence and knowledge so that they can handle nesting procedures without even noticing.

Let's start at the beginning... At its simplest level, on-screen buttons are used to control the movement of a traditional turtle, optionally leaving a path or not with the pen up/pen down commands. Add to this replay which allows children to look at the path taken and flood fill these to create simple shapes. But this can be made more interesting, challenging and motivating by adding a backdrop of pictures and/or words as in essence this is still a Textease screen. Add to this the fact that any Textease object can be named and used as a turtle, whether it is a simple shape, a photograph or clip-art. You can have more than one as well.

Moving on, sequences can be pre-set

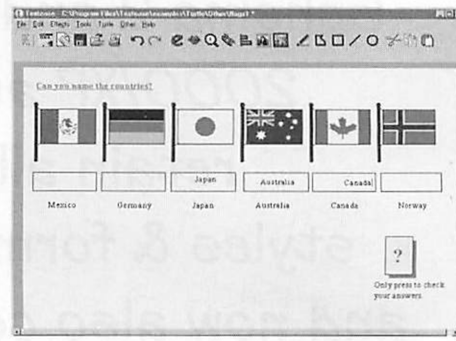


and run as scripts to create repeating patterns, introducing simple programming and control concepts. Or how about embedding scripts within scripts for a powerful, yet simple programming language?

But why stop at children moving graphics around a screen? There is much more here and the range of example files gives you some excellent ideas to play with from a classic game of Pong to a lateral thinking puzzle to a multimedia presentation. But is this just a pipe dream? Will children still only be skimming the surface of this program - the fate of its predecessors? So let's see how much time and prior knowledge Textease Turtle will require to get to this goal.

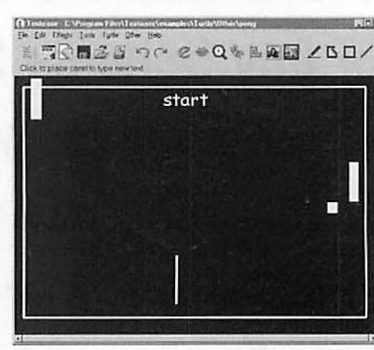
The first hurdle is lack of manual. I know that there is an on-screen guide and all 39 pages can be printed out, but although there are a couple of examples on how to create a procedure and passed parameters this is definitely a weak point. My wish list would include short tutorials and links to the ICT QCA and Numeracy Hour. Unperturbed I turned on the printer and made notes.

The learning curve has four stages to it. For the youngest users (Year 2) children can investigate mazes and shapes files provided within the program: First Logo and Shapes are pre-written files which are simple and very easy to recreate using standard



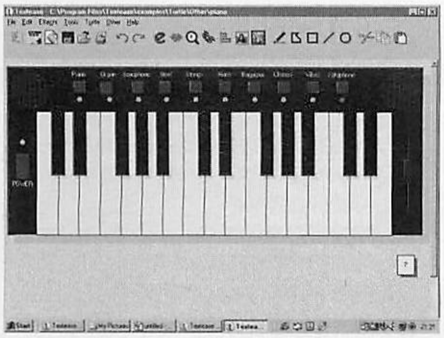
Textease tools. I quickly recreated these screens and more importantly my test group made their own mazes for one another too. There are on-screen buttons for forward, back, turn left, turn right, as well as an eraser and a house button which takes your turtle back to where it started.

The next stage is the Keypad which you can toggle between yellow, green and blue levels. Here the controls are in a separate window and it starts with picture buttons duplicating the on-screen buttons of the first stage while adding replay. The green level replaces the picture buttons with textual ones and the extra commands of repeat and end.



Finally, the blue level provides short commands and logo shortcuts. You can toggle through these at any time which allows for differentiation and a useful way for children to build and be seen to be building their skills. When children found something in the blue level tricky we backtracked through the Keypad to find the problem and solution.

Feeling confident, and maybe a little cocky, I moved on to the third stage and



the Command Line. This is where my partner teacher decided to have a cup of coffee, but dragging her back we persevered. Here all the Logo commands are available rather than the limited selection on the Keypad. So type Forward 20 in the additional window and your turtle will move forward 20mm. Lose your turtle and just type home he'll come back to you.

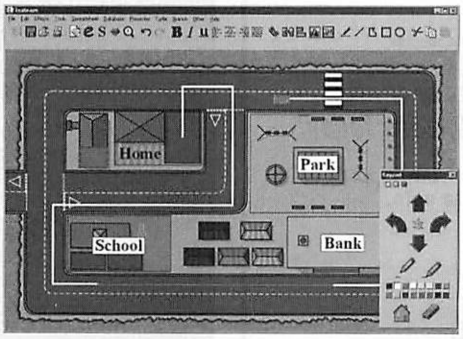
As you become more experienced with this you'll find yourself delving into three sorts of commands: system, turtle and logo. We concentrated on turtle commands by duplicating the commands we'd been using on the keypad learning that spaces were necessary and so on. It also made my testers want a quicker way of doing things which led nicely into the next stage - procedures. This is where you can easily lose people, so I was glad to see more time taken over these in the online manual.

Procedures are written in a separate window and you start by naming it and then clicking edit to type in your procedure. However, the manual suggests an excellent way of showing what is going on and I'll definitely use this in future. Simply use the Keypad at level 2 (green) and press the buttons; repeat 4, forward 20, left 90 and save. A square is created and the saved procedure is shown in its correct syntax in another window.

Then there are five ways of implementing this (or any) procedure: press run on the procedure editor window; type the procedure name on the command line; typing the name of the procedure anywhere on the page and pressing the run button on the button bar - this is really useful when teaching; the name is part of the body of other procedures; or select an object, use the Links window and set the Logo command.

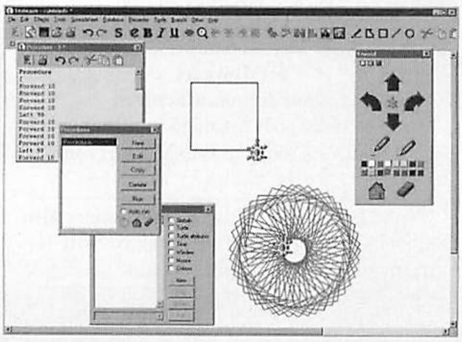
Finally procedures can have passed parameters. In effect this means that if you have a procedure named Polygon you can write Polygon 5 which will draw a pentagon and so on. Look at this in the procedure window and you'll see that the word sides follows polygon so that wherever sides appears in the procedure the number is substituted for the word. Great fun to use with children.

So far so good, but I was a little concerned with this passing reference to Links. I've used this with HTML files and noticed the icon, but haven't really explored this aspect. Selecting a turtle and clicking the button revealed a range of options, that were not at all well explained with the exception of the new addition, Logo. In essence if you want a procedure to start when you click on an object on the screen, highlight it, tick the Logo button and choose a list of



commands from a list or type in your own procedure. The next time you click this object your commands will be obeyed.

One of the nicest elements of this program is the ability to create a turtle from anything and in fact have numerous turtles acting independently. There are three different ways of doing this. Simplest is by opening the accessing the Turtle menu and selecting new turtle. Choose one and place it anywhere on screen - this will be its home position. Alternatively, place any object on screen from photograph to



boxes and text made within Textease. To make it a turtle, access the Turtle menu again and choose make turtle. Finally, you type new on the command line and a default turtle is placed on its home position.

These home positions can be changed at any time via the Details screen opened via the Turtle menu. You'll be told the current heading, speed and home and you can reset these as well as changing the units (by default mm) into inches or turtle units. In addition you have control over the display of the turtle. You can make it inactive so that it won't respond to home commands, put the pen up, hide it, don't allow it to rotate when you change directions and change the style and line thickness of the trail effects. In addition, you can change the boundary restraints. By default the limits are the page edges, but you can make your turtle wrap or bounce or fence it in.

One aspect we haven't mentioned yet are the Variables. These are incredibly useful when creating games and simulations and give you control over everything from the number of lives a graphic has, to the paper size and colour. The temptation is to use everything at once and then get bogged down in the attributes, operators and functions.

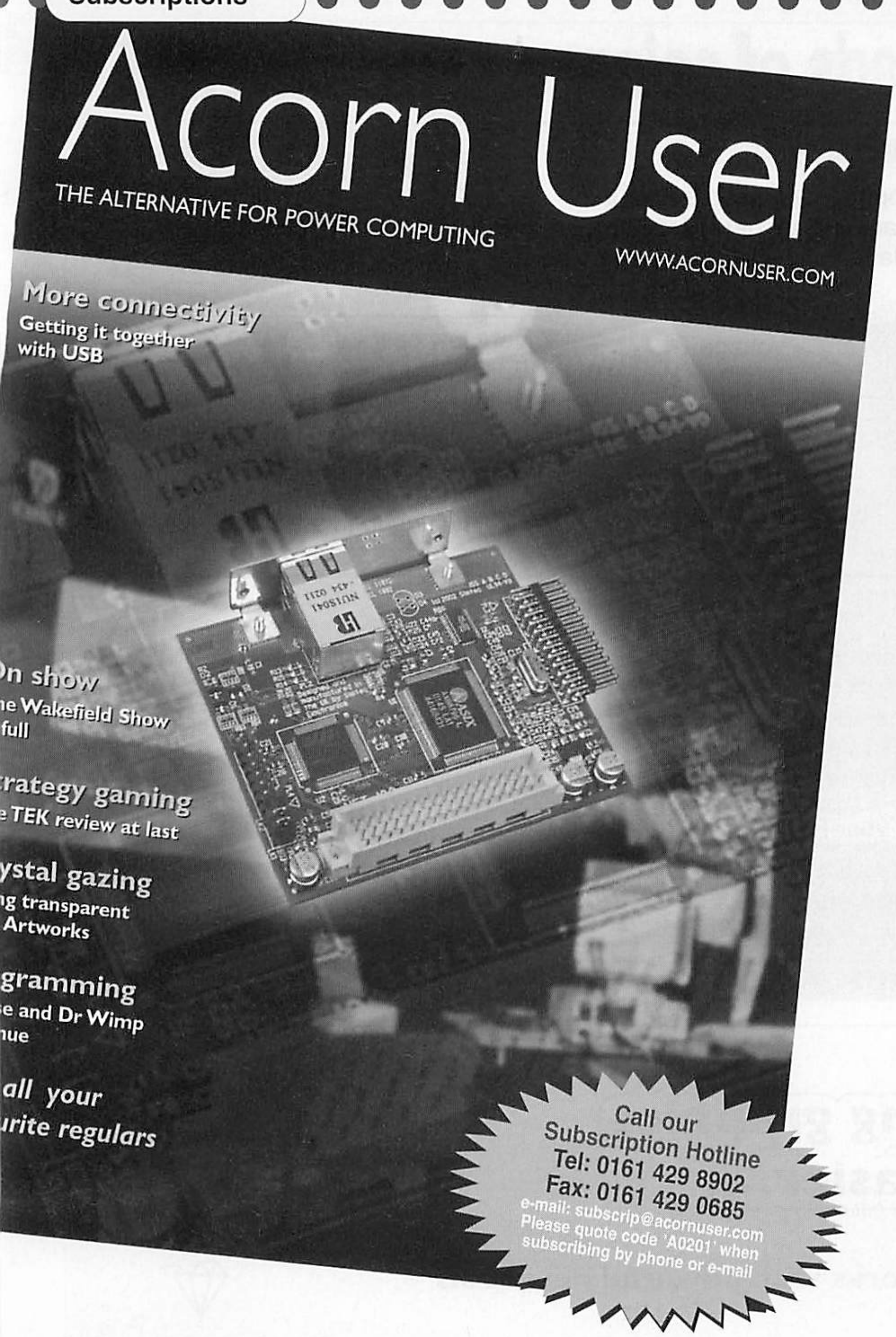
You do not have to be a programmer to do anything here, the different levels follow quite naturally from one to another. So as you find yourself adding more buttons to a screen you see yourself assigning a sound or animation to it. As you can move one turtle why not move more and so the global and turtle command types make more sense as they are used.

So has Textease Turtle allowed control, investigation of shape and symmetry and started on the route of more complex programming? Are worksheets and simulations a real possibility? Yes. I really enjoyed using this program and the fact that the programming doesn't get in the way of what I want to do. Although I felt the lack of manual and handy list of commands, the sample files really inspired my testers - especially the piano - and the fact that you can access the procedures and thought processes behind them.

Product details

Product:	Textease Turtle
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Email:	sales@softease.co.uk

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Logitech mice

A short while back I purchased a Logitech mouse following Neil Farnham-Smith's article in Acorn User, and subsequent to a telephone conversation with the magazine editor.

I am well pleased with the mouse generally, all the functions of which work as designed, however, I did find that the operation of the wheel/menu button particularly irksome. To be fair, you did mention that some people did find it took some getting used to.

The problem was that in pressing the wheel, more often than not, I pressed one of the other buttons, usually the Adjust button. I had to make a very deliberate effort to get a clean operation of the Menu acton.

The problem was sufficiently annoying for me to determine to find a way of overcoming this difficulty. I tried a few alternatives, then settled on one, then an improved one.

The first modification was to fix a cap onto the top of the wheel. I used Copydex for the adhesive as I did not want to have a irreversible situation in case it did not prove to work satisfactorily. In the event it worked well, but was a bit rubbery to the feel. At no time did the adhesive fail.

The later modification involved removing the wheel and its spring completely, and replacing it with a button which works directly on the internal mechanism. A small spindle was necessary to provide for the fitting of the return spring which biases the button in the upwards direction and the attachment shows this. This modification works perfectly and is in regular use.

I realise that these modifications deactivate the designed function of the wheel, but I was happy to forego this for a reliable menu button function.

The wheel system may have some material benefit in the PC/Windows world, but I could not see that it had any merit on a RiscOS machine, as I found it easier and quicker to move the pointer by moving the mouse than I did by rotating the wheel. Perhaps I have missed something somewhere, but I am content to do without it.

I offer these comments merely in the hope that they will be helpful/of interest, especially as you indicated that others had commented on the use of the wheel. If you wish to pass on to others any of the enclosed comments, then please feel free to do so.

Graham German
by e-mail

Print happy

At my school, we have six A7000s which run very reliably. I have just bought some HP920C printers and the latest printer driver on the applications is for the HP850 and it won't work. Please could you tell me where to get a printer driver from, as it is a shame that the computers aren't being used. Thank you.

Sara Bull
Derby

I cannot guarantee you will find what you are looking for but if you try www.riscos.com as a starting point that might be the place to find help.

Luckily we will soon be able to use a whole new range of printers with the USB cards now coming available, although we will still need the printer drivers, of course.

How does the future look?

I have been sticking with the RISC OS market for a long time now. I was wondering if you could give me any idea as to whether there's any hope? I've been hoping for years that something good was going to happen but nothing ever seems to materialise, there are always endless delays after premature announcements.

And, by the way, why do you have so many PC-related adverts in the magazine? I don't want it to end up like one of those bloated PC magazines.

Ray Townshend
by e-mail

Hope is a good thing, but it can wear thin after a while I know. However I really do think things are beginning to look up, I won't get overly enthusiastic but we are beginning to see the appearance of new hardware and that always gives the market a bit of a spur.

The new faster network cards are the first finished product to reach the market, although to truly benefit you do have to have faster hubs as well. These cards have been going like hotcakes particularly at the highly successful Wakefield Show.

Next up we have the USB cards, both Castle and Simtec have the real thing, and you can read our new regular feature on USB which will cover both products and what drivers are available.

This is a particularly good development because it allows dealers to invest in some generic hardware to sell on to you.

Then comes the portable, the working prototype was at the Show, read our show round-up in this issue to get the full picture. And maybe, dare we say it, the Omega? Microdigital are beginning to make noises again so perhaps that is actually not too far away. But let's not hold our breath, and don't avoid buying new hardware for your current machine just because a new machine might be round the corner. The corner may be further away than you think.

As to the adverts ... well, there are a couple of points on this: Firstly, the majority of Acorn users either own or use PCs, so this type of advertising is not irrelevant; and secondly, the magazine is supported by advertising so anyone who advertises is supporting RISC OS directly or indirectly.

Less then optimistic

I read with particular interest letters from Mark Syder (April) and Phil Clark (May) regarding the Microdigital Omega and agree that considerable damage has been done to the RISC OS market by its non-appearance and lack of news.

In the meantime I had taken stock of my changing computer requirements and decided that because my son and family had moved to Switzerland for a few years, I needed a video conferencing facility to keep in touch with my young grandchildren. I needed also the ability to deal with e-banks such as IF, Smile and NatWest. Other requirements included a USB card reader for my digital cameras and the ability to maintain street cred with my other grandchildren who were weaned on 'Flossie the Frog' etc. but now expect to play 'Harry Potter and The Philosopher's Stone' for instance.

So, using money intended for Omega, I bought a Windows PC now upgraded to XP with 1.5Gb RAM and complete with DVD player, CD burner, four USB (now USB2.0) ports, webcam and surround sound. It works for me.

I have been loyal to the Acorn market for twenty years — from an 'Alpha' of the BBC 'B' through the 3010, A540, Risc PC SA OS4.02 ViewFinder to the phantom Omega. I have bought most of the major software up to Vantage and spent a few thousand pounds.

But until some 21st Century serious RISC OS hardware appears on the market, I have no intention of spending any more 'Acorn' money — not even on your recommended 'consumables'. I shall continue to subscribe to the Acorn magazines and use Ovation Pro and PhotoDesk for the time being. I have given up on the Internet Suite — whatever happened to the promised Oregano upgrade?

Thanks for the new look magazine. I do admire your optimism.

Peter Brigginshaw
by e-mail

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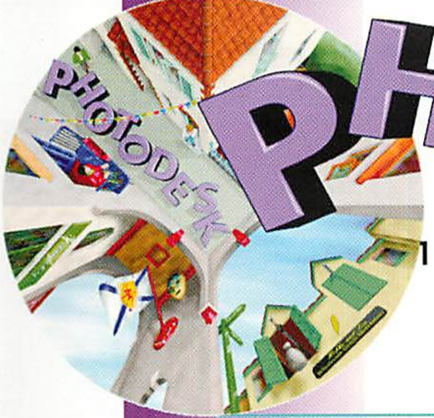
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